The Predicament of Evolution

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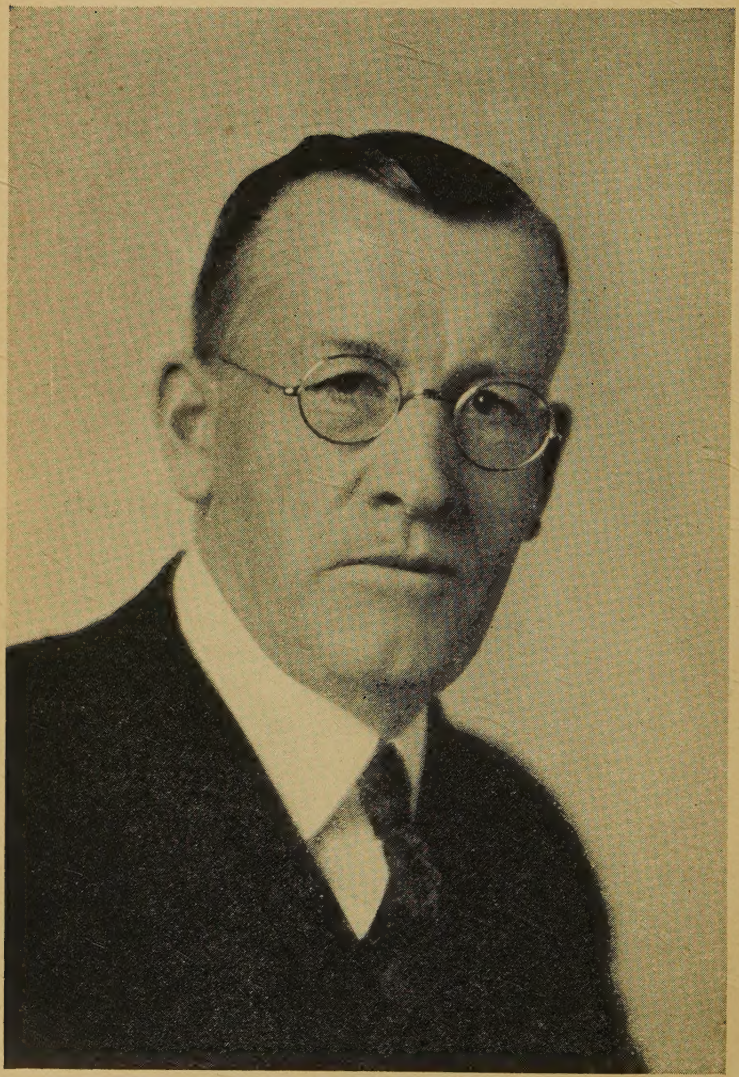

George McCready Price

The PREDICAMENT *of* EVOLUTION

By

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"The New Geology, a Textbook for Colleges" (1923); "The Fundamentals of Geology" (1913); "Q. E. D., or New Light on the Doctrine of Creation" (1917); "Poisoning Democracy" (1921); "The Phantom of Organic Evolution" (1924); etc.

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Chapter One

The Problem

THERE are a great many people who constantly wonder why we are having all this fuss about the theory of evolution. Many think it a shame that professing Christians should engage in such an unseemly quarrel as is now going on between the Fundamentalists and the Modernists. These lovers of peace are ready to become indignant at both parties. They inquire, Is not the present controversy worse than useless and quite contrary to the spirit of Christian harmony and good will? This war in the churches seems to them of the same order as the late war among the nations, and almost as disgraceful to our modern civilization.

But there are genuine reasons for the present situation. And the reader's attention is invited to a brief study of these reasons throughout the following pages.

The common notion that the crux of the whole difference between the Fundamentalists and the Modernists lies in their opposite attitudes toward the theory of organic evolution is not wrong. But the general public *is* wrong on two very important points.

1. It is wrong in supposing that this difference of attitude toward the theory of evolution is concerned chiefly with the theory of man's origin from the lower animals by natural development. This is partly true; but such a statement of the problem really evades or covers up the chief point at issue after all.

The religious problem connected with evolution is primarily the problem of *sin*, which has been and always will be the greatest problem confronting mankind. The *fact* of sin cannot be denied; as G. K. Chesterton remarks, it is a fact as practical as potatoes. It is as undeniable as the dirt on one's face or the rent in one's coat. The problem arises when we attempt to *account for* it, or when we try to find a *remedy* for it.

The Real Differences

Evolution professes to account for sin; but it has no proper remedy for it. Christianity accounts for sin, and also guarantees a remedy for it,— a remedy both for the individual instance of

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sin in the person of the sinner, and also for the sin of the world as a whole. And it is because the evolutionary account of sin and the Christian account of sin are opposed to each other that we are having all this present controversy. Also the two methods of dealing with sin and of forecasting its outcome, are radically different.

Sin is here with us. How did it start? Christianity says that sin is the result of the abuse of freedom or free choice on the part of a being made originally in the likeness of his Creator; suffering and death are only the natural or inevitable consequences of this primal sin and its subsequent repetitions. Evolution says that sin, suffering, and death are inevitable, a part of the very nature of things, something inherent in matter itself, a sad entail which we have inherited from the star-mist and the long trail of our brute ancestors. As for any further explanation than that, evolution has none; though two suggestions are offered. Either *matter* is eternal, and contains within itself an inherent element of conflict or resistance to moral and spiritual good; or, if God made matter, He must have endowed it with this troublesome element of physical and moral evil, because of some wise purpose that we do not understand.

Is man only a thinking animal?

Limiting God

This idea of the past eternity of matter has given rise to the doctrine of a finite or limited God, who is doing the best He can under the circumstances, and needs our co-operation in fighting against the evil tendencies of the stuff of which the universe is composed. This doctrine, which is alike dishonoring to God and

disgraceful to the people who teach it, has been advocated by J. S. Mill, William James, and other philosophers, and has been parroted by such modern writers as H. G. Wells.

As for a remedy for sin, Christianity has a well-known one, attested by its great cloud of witnesses, its millions of twice-born men and women, and also attested by the transformations it has effected in communities and nations wherever it has been tried. It also has a very definite program for the future, whenever the rebellion against God that is now in progress will have been finally disposed of by the Eternal One. In contrast with this positive promise of Christianity, evolution tries to encourage us with the hazy hope that at some far-off time the world will, as Mr. Mauro expresses it, become "a more comfortable place for the man of the future to sin and die in." There is no point of comparison between these two programs; it is all contrast.

Shall we trace our ancestry through this?

Such are some of the major points in dispute that cluster around the theory of organic evolution, as contrasted with the Bible doctrine of a real creation.

But there are some immediate reasons why we are just now witnessing a renewed and very active discussion of the question of evolution. Ten years ago probably as many people believed in the theory of evolution as now believe in it; but there was little or no discussion of the question. What has made the difference?

The difference is due to the fact that to-day we are witnessing a widespread revolt against the theory; the opponents of evolu-

World Wide Photos

How the scientists do hug the evolution theory.

tion have now banded together and have become militant. This change of attitude on their part, from meek, or at least comparatively passive submission, to militant revolt, can in its turn be traced to certain scientific developments that have taken place within recent years. The study of these scientific developments will be our chief concern in the following pages. They must be important; for a knowledge of them has become the chief dynamic that has within only a year or two sent forth thousands of crusaders against a system of teaching that many people had come to regard as settled for all time.

This brings us to the second point on which the general public is wrong.

Theory at the Mercy of Facts

2. It is wrong in supposing that the theory of evolution is in as favorable a condition as it was a decade or two ago. And in saying this I do not refer merely to Darwinism, but to the evolution theory as a whole.

The theory of evolution is based on scientific evidence; and whenever new discoveries arise which throw discredit upon the theories based upon our previous knowledge, the theories always have to be revised, or sometimes even thrown away entirely. Facts must always have the right of way over theories, no matter how venerable with age these theories are. Every scientific theory held to-day is at the mercy of the facts that may be discovered to-morrow. As evolution is primarily a scientific

theory, its tenure of life is just as precarious as that of any other theory. And it is primarily because many thousands of people have become convinced that the theory of evolution is scientifically unsound and impossible, that we are witnessing the present widespread agitation of these questions.

But certain limitations of our discussion must be made; for evolution as a world-philosophy of universal range is clearly beyond the scope of our present purpose. As a universal philosophy, evolution starts with the star-mist; it deals with the long-past history of our globe and its plants and animals; and it has come to be applied to all matters of history, sociology, and ethics. The present writer has devoted other works to the discussion of various parts of this general subject. Here it is planned to consider briefly some of the more recent discoveries which have a bearing upon the problem of organic evolution. The alleged fact of man's development from animal ancestors stands or falls with the thesis of *organic evolution*, as an explanation of the origin of plants and animals in general. Accordingly, this will be the problem considered in this book.

Kadel & Herbert

A "reconstructed" dinosaur of the days of old.

Evolutionists Disagree on Evolution

That this phase of the general subject is not by any means as definitely settled as some people have long supposed it to be, will appear from the following statement made by Dr. Wm. Emerson Ritter, professor of zoology in the University of California:

"If one scans a bit thoughtfully the landscape of human life for the last few decades, he can hardly fail to see signs that the whole battle ground of evolution will have to be fought over again; this time not so much between scientists and theologians, as among scientists themselves."—*Science, April 4, 1922, p. 398.*

I believe that this statement very accurately represents the present situation from the point of view of the believers in organic evolution. They feel that the old proofs on which they have been relying are now failing them; they must begin again to lay other foundations for their theory, if they wish to have a theory of organic development that is strictly up to date and fit to be classed as scientific.

Not all scientists are reactionaries or standpatters; the really big ones are progressives, and are willing to follow wherever the real facts lead them. Such men as J. P. Lotsy, of Holland, William Bateson of England, and Thomas Hunt Morgan of this country, are very far from being satisfied with the evidences hitherto relied upon to prove the methods or even the fact of organic evolution. The botanists especially are discarding most of the older views regarding the methods of organic development; among them may be mentioned Dukinfield Henry Scott, H. B. Guppy, John C. Willis, and A. G. Tansley, all leaders among the scientists of England. But some of the zoologists are

The ascent of man according to evolution.

not far behind, as for instance, Arthur Willey, J. T. Cunningham, and E. W. MacBride. All of these men still profess to believe in the general doctrine of organic development; but they are in hopeless disagreement among themselves as to *how* this development has come about; and almost every one of them has openly repudiated those subsidiary theories that were taught by Charles Darwin and on which the latter made the general doctrine of organic evolution "a going concern," as J. Arthur Thomson puts it.

But if the science of biology is to-day hopelessly entangled in disagreements regarding the value of natural selection or the inheritance of acquired characters, or regarding the facts of genetics and of embryology as supports for organic evolution, the science of geology has ceased to be the strong supporting foundation on which Darwin constructed his theory. The New Geology is no longer evolutionary at all; it has become the New Catastrophism; and it is safe to say that this collapse of the evolutionary form of geology is one of the chief reasons for the present predicament of the general doctrine of organic evolution.

The descent of man according to divine record.

Chapter Two

Heredity and Variation

TWO ideas that are very intimately connected with any theory of organic development, are heredity and variation. Heredity is shown in all the various ways in which an animal or a plant is like its parent. Variation is illustrated in the ways in which it is unlike its parents or its ancestors. The two ideas are antagonistic; if variation had full sway there would be no stability of type; if heredity only prevailed there could be no evolution. In Darwin's day very little was known about either of these principles; but this ignorance of the real facts permitted Darwin to assume almost anything he wished regarding variation. Within modern times Mendelism has taught us many exact facts regarding heredity, with the result that, as Edwin Grant Conklin says, "At present it is practically certain that there is no other kind of inheritance than Mendelian."—"*Heredity and Environment*," *p. 99*. This leaves a very slim chance for variation in the Darwinian sense to affect the offspring, so that, as D. H. Scott says, "it is clear that we know astonishingly little about variation."

Mendelism is the term which embraces pretty much all we know about heredity and variation. Gregor Mendel (1822-1884) did his work during the third quarter of the nineteenth century, working chiefly with the common garden pea (*Pisum sativum*). Charles Darwin was then living, but neither he nor any one else seemed to give much attention to the queer experiments in breeding which were being so patiently and accurately carried on by the obscure monk of Brunn, Austria. Mendel used to say, "*Meine Zeit wird schon kommen*," ("My time will yet come"); but he had been dead some sixteen years before the wonderful facts that he had discovered were brought to the attention of the scientific world. Since then these facts and principles have worked a complete revolution in biology.

The Discoveries of Mendel

Bateson has told us that: "Had Mendel's work come into the hands of Darwin, it is not too much to say that the history of

Gregor Mendel (1822-1884)

the development of evolutionary philosophy would have been very different from that which we have witnessed." What the difference would have been, I shall leave the reader to decide after reading the remainder of this chapter.

Mendel differed in his methods from all previous students of heredity in that he concentrated his attention each time upon some *one pair* of contrasted characters, giving no attention to the other characters which were present. In this way he arrived at the great truth that all the various characters of the organism are *separately* transmitted in heredity. For example, when he crossed a tall pea with a dwarf, he found that all the first hybrid generation were always talls, with no dwarfs and no intermediates.

Accordingly, he called the tall character *dominant*, and the dwarf character *recessive;* and a pair of contrasted characters that act in this way are now called *unit characters*. The hereditary principle that is back of this behavior, as the cause of the dominance or the recessiveness, is termed a *factor;* and these factors are now thought to be carried along from one generation to another by the *chromosomes* of the cell nucleus. But this matter will come up again later.

But when Mendel allowed these hybrid talls to pollinate and produce seeds in the usual way, he found that in the next hybrid generation he always got *three talls to one dwarf out of every four*. By carrying the experiment further, it was proved that these dwarfs of the second hybrid generation always bred true ever afterwards, proving to be just as purely dwarfs as if they had been bred from a thousand generations of pure dwarf stock.

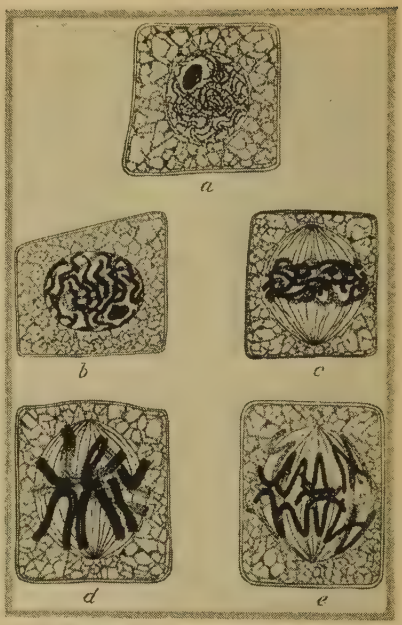
One out of the three talls also was always found to be pure bred for tallness, always coming true, thus making another quarter of the total. The remaining fifty per cent, which were talls, proved to be mixed, always acting like the first hybrids, splitting

up in the next generation with the same mathematical regularity.

The Thunder of Facts

These experiments have been verified repeatedly in all parts of the world. Thousands of such unit characters of size, form, color, etc., have been separated out as pure dominants or pure recessives, until it is now generally recognized that there is no other kind of inheritance than the Mendelian.

The diagram at the bottom of the page illustrates these principles in the case of the tall and the dwarf peas.



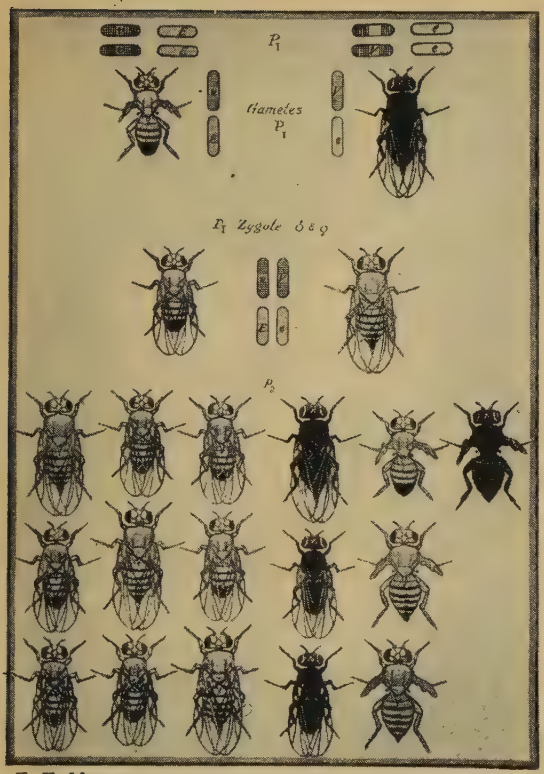
T. H. Morgan

Cells showing chromosomes.

Among the most extensive and careful experiments along this line are those by Thomas Hunt Morgan and his associates at Columbia University. Their work has been chiefly with the fruit fly (*Drosophila*) and related types; and it has been carried on now for over ten years.

During this time over two hundred new types of this fly have been produced, each with a definite pedigree, and each capable of being again produced at will by the same combination of parents. Every portion of the fly has been affected by one or another of these changes. The wings have been shortened or greatly changed in shape, or eliminated entirely. A number of

	1st Hybrid Generation	2nd Hybrid Generation	3rd Hybrid Generation	4th Hybrid Generation
TALL PLANT	100% mixed talls	25% pure talls	= 100% pure talls	= 100% pure talls
			25% pure talls	= 100% pure talls
		50% mixed talls	50% mixed talls	25% pure talls
				50% mixed talls
				25% pure dwarfs
DWARF PLANT			25% pure dwarfs	= 100% pure dwarfs
		25% pure dwarfs	= 100% pure dwarfs	= 100% pure dwarfs



T. H. Morgan

Results obtained from the fruit fly.

different colors of the eye have been produced, even totally blind types having been developed. And each of these changes or *mutations* has been produced, not gradually, as the Darwinians would have supposed, but at a single step.

Darwin's Armchair Theories

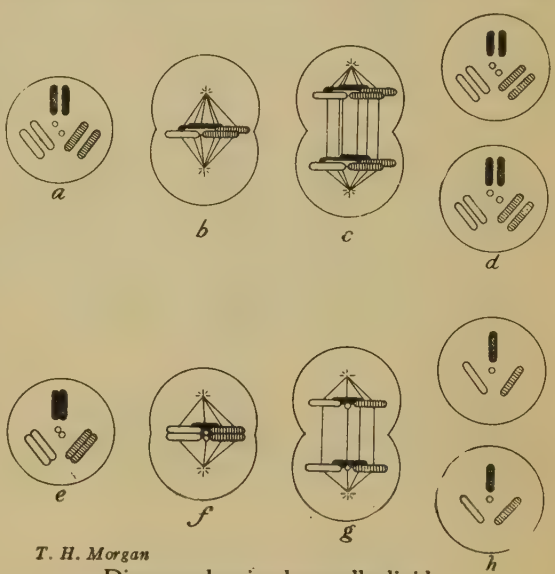
One cannot fail to appreciate the sarcastic references that Morgan makes to the armchair theories of the Darwinians, which have so long and so harmfully dominated all biological studies.

"Formerly," says Morgan, "we were told that eyeless animals arose in caves. This case shows that they may also arise suddenly in glass milk bottles, by a change in a single factor. . . . We used to be told that wingless insects occurred on desert islands because those insects that had the best developed wings had been blown out to sea. Whether this is true or not, I will not pretend to say; but at any rate wingless insects may also arise, not through a slow process of elimination, but at a single step."—*"A Critique of the Theory of Evolution" (1916), p. 67.*

Many remarkable things have been learned regarding those parts of the ovum and the sperm that have now been proved to be the carriers of the hereditary characters. These carriers of heredity are the *chromosomes*, small threadlike portions of the

nucleus of the cell that can be watched under the microscope during the various processes through which the cell passes.

All the higher forms of life invariably arise from a single fertilized ovum, this ovum being thus a blending of two cells, the male and the female. Before fertilization, both the sperm and the ovum undergo some complicated changes which need not be described here, but which result in the original number of the chromosomes being reduced in number to *exactly half the original number* for the particular species represented. This half number of the chromosomes is given as 7 in the garden pea; in corn 10; in the mouse 20; in the tomato 12; in wheat 8; and in man "probably 24" (Morgan). Every cell in one of these species always carries the same number of chromosomes.



T. H. Morgan

Diagram showing how cells divide.

Nothing New Evolved

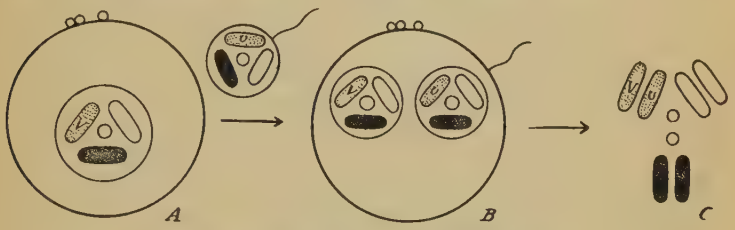
Reduction is thus a preparation for the union of the two cells; and by this union, or *fertilization*, the original number of chromosomes is restored, the sperm and the ovum each having the half or reduced number.

In the examples of hybridization mentioned above, only one pair of contrasted characters was dealt with. What would happen if *two* pairs of such unit characters are combined?

It has been found that when a kind with *two dominants* is crossed with one possessing two recessives, the results become more complicated. For out of every sixteen hybrids thus produced, nine will show both dominant characters, one will show

both recessives, while the remaining six specimens will show two distinctly *new types*, three of one and three of another.

For example, if we cross a tall yellow pea with a dwarf green pea, the first hybrid generation will be all tall yellows; for both tallness and yellowness are dominant. But in the second hybrid generation, out of every sixteen plants, we get nine tall yellows, one dwarf green, with *three dwarf yellows*, and *three tall greens*. These last two kinds are wholly new forms, which are thus called *mutants*. Many other and even more extraordinary mutants have been produced among both plants and animals.



T. H. Morgan

Diagram showing method of fertilization.

When such mutants were first produced they were hailed as "elementary species," on the supposition that in some such way strictly new species might be produced. But further study of the matter has shown that all these new types can by back-crossing be bred back to the original kinds. Hence in Mendelian breeding we are evidently only marking time, only working around in a circle, much the same as the chemist does in his laboratory by mixing compounds. The latter certainly never hopes to get *new elements* that he did not have in his original mixtures.

Accordingly, where is there any organic evolution in all this?

Acquired Characters Not Transmitted

Obviously there is no room for absolutely new characters to be shown in the offspring, unless we may suppose that some external effect could become registered in one or more of the chromosomes of either the sperm or the ovum. Unfortunately, there is no known means by which this could be imagined to take place.

One of the chief difficulties in this connection is that the reproductive cells apparently are not in any way affected by

what may happen to the body cells, or to the body as a whole. In all the sexually reproduced animals, the reproductive cells constitute a class apart, a sort of cellular aristocracy, which take no part in the metabolism or other functions of the body, and hence are not in any way affected by what may happen to the body cells in the way of use or disuse, or in the way of effects brought about by the environment. It is on this account that *acquired characters are not transmitted in heredity*, because no experiences that the *soma*, or the body, passes through can become registered in the germ cells.

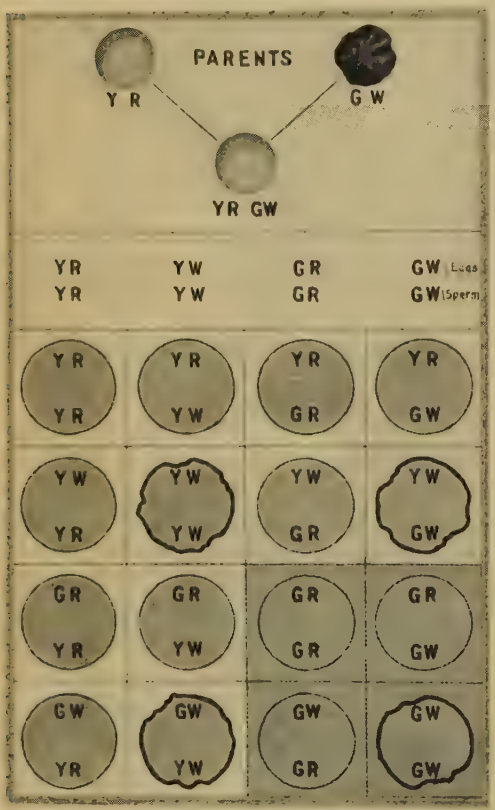

PARENTS
Y R
G W
YR GW
YR YW GR GW Eggs
YR YW GR GW Sperm
YR YR YR YR
YR YW GR GW
YW YR YW YW YW YW YW YW
YR YW GR GW
GR YR GR YW GR GR GR GW
GW YR GW YW GW GR GW GW

Diagram showing result of crossing round-yellow and green-wrinkled peas.

We now know that the *variations* wherein one of the offspring differs from its parents always come under the one or the other of two very distinct classes.

1. *Fluctuations.* These are sometimes called continuous variations, and are produced by whatever affects the body organism, such as variations in the food or the surroundings. But these fluctuations are not capable of being transmitted to the offspring.

2. *Mutations.* These may be large or small in degree; but they

are not produced by the surroundings. They have been inherited from the one or the other of the parents; and in turn they will always be passed along to the succeeding generation, either as dominants or recessives.

But where are we now, in the light of all these modern discoveries in genetics, or the science of breeding?

This is a large question, and can best be considered in another chapter.

"Had Mendel's work come into the hands of Darwin, it is not too much to say that the history of the development of evolutionary philosophy would have been very different from that which we have witnessed."—Bateson.

Chapter Three

The Biological Blind Alley

THE present situation in the biological sciences is so peculiar that I shall not depend upon my own unsupported statements. I shall let some of the leading scientists themselves state the facts. In this way the reader can judge for himself regarding the predicament in which the evolution doctrine is to-day.

I shall begin with some men who are advocates of Mendelism; for, strange to say, there are some scientists who are almost violently opposed to the use of Mendelism in studying evolutionary problems.

Bateson, in his Australian address before the British Association in 1914, said:

"The student of genetics knows that the time for the development of theory is not yet. He would rather stick to the seed-pan and the incubator. . . . Every theory of evolution must be such as to accord with the facts of physics and chemistry, a primary necessity to which our predecessors paid small heed. For them the unknown was a rich mine of possibilities on which they could freely draw. For us it is rather an impenetrable mountain out of which the truth can be chipped in rare and isolated fragments."

Seven years later, in his Toronto address before the American Association, he was even more explicit.

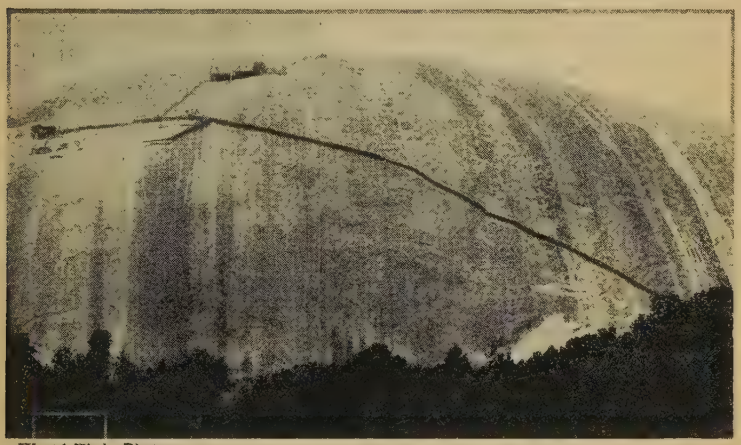
"We cannot see how the differentiation into species came about. Variation of many kinds, often considerable, we daily witness, but no origin of species. . . . Meanwhile, though our faith in evolution stands unshaken, we have no acceptable account of the origin of 'species.'"—*Science, Jan. 20, 1922.*

Bateson's Act of Faith

Elsewhere in this same address Bateson dwelt upon the fact that he could still believe in the general idea of evolution "in dim outline," and only by a sort of act of faith in the testimony he supposed has been furnished us by geology,— a feature which will be considered later. But he proceeded to say:

"That particular and essential bit of the theory of evolution which is concerned with the origin and nature of *species*, remains utterly mysterious. We no longer feel as we used to do, that the process of variation, now contemporaneously occurring, is the beginning of a work which needs merely the element of time for its completion; for even time cannot complete that which has not yet begun."

Still more recently Dr. Bateson has expressed his wonder at the opponents of Mendelism, and has told them that they have been expecting too much of this new method of experimental breeding. "It has not given us the origin of species"; but "it has closed off a wrong road," along which the evolutionists were trying to follow up the trail. The two things that we cannot explain are (1) those very characters that make one species differ from another, and (2) the reasons why living things are so well adapted to their surroundings and their needs, both in respect to their various organs and habits and also as entire



World Wide Photos

Stone Mountain, Atlanta, Ga. The unknown is "an impenetrable mountain."

units. As he himself expresses it regarding these two points, "we do not understand specific differences, nor can we account for the adaptative mechanisms. Was it to be expected that we should?" The one very important result that modern breeding experiments have reached is to settle once for all that the various transferable characters brought to light in these experiments "*do not culminate in specific distinctions.*" This is the "wrong road" which Mendelism "has finally closed off."

And he proceeds to say:

"I notice that certain writers who conceive themselves to be doing a service to Darwinism, take thereupon occasion to say that they expected as much, and that from the first they had disliked the whole thing. I would

remind them that the class of evidence to which we were appealing was precisely that to which Darwin and every other previous evolutionist had appealed."—*Nature, May 10, 1924.*

Dr. D. H. Scott.

Old Theories Questioned

But Bateson, while one of the most prominent biologists of the world, is not the only one who is expressing these sentiments. Dr. D. H. Scott, the botanist, in his address before the British Association in 1921, gave us the following:

"It has long been evident that all those ideas of evolution in which the older generation of naturalists grew up have been disturbed, or, indeed, transformed, since the re-discovery of Mendel's work and the consequent development of the new science of genetics. Not only is the 'omnipotence of natural selection' gravely impugned, but variation itself, the foundation on which the Darwinian theory seemed to rest so securely, is now in question.

"The small variations, on which the natural selectionist relied so much, have proved, for the most part, to be merely fluctuations, oscillating about a mean, and therefore incapable of giving rise to permanent new types. . . . The mutations of De Vries, though still accepted at their face value by some biologists, are suspected by others of being nothing more than Mendelian segregates, the product of previous crossings; opinion on this subject is in a state of flux. In fact, it is clear that we know astonishingly little about variation. . . . At present all speculation on the nature of past changes is in the air, for variation itself is only an hypothesis, and we have to decide, quite arbitrarily, what kind of variations we think may probably have occurred in the course of descent. . . . It may be that the theory of natural selection, as Darwin and Wallace understood it, may some day come into its own again. . . .

A Generation that knows not Darwin

"For the moment, at all events, the Darwinian period is past; we can no longer enjoy the comfortable assurance, which once satisfied so many of us, that the main problem had been solved — all is again in the melting-pot. By now, in fact, a new generation has grown up that knows not Darwin." —*Nature, Sept. 29, 1921.*

It is true, Scott goes on to say that he cannot get away from the general idea of evolution somehow, "even if we hold it only as an act of faith"; for he thinks that the evidence of the fossils

is still "unshaken." However, in his still more recent book, "Extinct Plants and Problems of Evolution" (1924), he seems to have lost faith even in much of the supposed value of the fossil evidence. This subject of geology and the fossils will be discussed in Chapter V. Here it may be sufficient to give the words of some eminent authorities as to the value of fossil evidence in helping to trace out lines of descent for the various animals and plants.

The following is the opinion of J. P. Lotsy, the Holland botanist:

"Phylogeny, *e. g.*, reconstruction of what has happened in the past, is no science, but a product of fantastic speculations."—*"Evolution by Means of Hybridization" (1916), p. 140.*

I agree with this statement with all my heart. And it only adds to its force when Lotsy proceeds immediately to say:

"Those who know that I have spent a considerable part of my life in efforts to trace the phylogeny of the vegetable kingdom, will know that this is not written down lightly; nobody cares to destroy his own efforts."—*Ibid.*

An Illusory Vision

A. G. Tansley, in his address before the Liverpool meeting of the British Association (1923), indicates that the recent history of evolution makes the search for common ancestors among plants "literally a hopeless quest, the genealogical tree an illusory vision."—*Nature, March 8, 1924.*

A. C. Seward.

Also Prof. A. C. Seward, of Cambridge University, tells us that "the present tendency is to discard the old-fashioned genealogical tree with its wonderful diversity of branches," as a method of representing the course of evolution; for he says that "a student who takes an impartial retrospect soon discovers that the fossil record raises more problems than it solves."—*Nature, April 26. 1924.*

No wonder F. O. Bower, Professor of Botany in the University of Glasgow, in commenting on these and similar remarks, says that "at the present moment we seem to have reached a phase of negation" with respect to the attempts of the botanists to trace out lines of evolutionary descent. And he adds: "I believe that a similar negative attitude is also to be found among those who pursue zoological science."—*Nature, March 8, 1924.*

Underwood

John Burroughs.

These remarkable statements, be it noted, are not from obscure men, nor are they fished up from the musty science of two or three generations ago. They are from men who are in this year of grace, 1925, standing in the very forefront of modern progress.

Darwin's Theory Shattered

If now we return to the strictly biological phase of the subject, we have the statement of Vernon Kellogg that since the time of Charles Darwin, "the two most important explanations of evolution current in Darwin's time; namely, Lamarckism, or the inheritance of acquired characters, and Darwinism, or natural and sexual selection, have been weakened rather than strengthened as sufficient causes of evolution."

Kellogg goes on to say that Lamarck's theory was "a plausible explanation, but one wholly dependent upon the 'inheritance of acquired characters,' which, unfortunately, does not seem to happen. . . . Acquired characters, in the Lamarckian sense, are not inherited."—*New Republic, April 11, 1923.* The Darwinian theory, he further says, was "also a plausible explanation, but also much weak-

ened, if not shattered, by the results of modern biological study."

Darwin, said John Burroughs, "has already been shorn of his selection theories as completely as Samson was shorn of his locks."—*Atlantic Monthly, Aug., 1920, p. 237.* Also we know that Lamarckism was disposed of thirty years ago by the work of August Weismann. And now Mendelism, in the hands of thousands of students of genetics in all parts of the civilized world, seems to have administered the finishing blow to any rational hope of explaining the origin of the *larger groups* of plants and animals, though it has helped wonderfully in pointing out an easy explanation of the great variety of the smaller groups, the "species" and sub-species, all over the world, and has also pointed out how all this multitudinous variety might have come about in a very short time, from a comparatively few original types, and without the necessity of supposing any long ages in which this differentiation was accomplished.

No Abstract Life

In speaking here of the "larger groups," I am not referring simply to the phyla, the classes, and the orders, but to the *families* and the great *sub-families.* These, it seems to me, are the original biological units. Regarding their origin, I can see nothing but a real original creation, just as we must postulate a real creation for the origin of life. As I have pointed out elsewhere, there is no such thing as "life" in the abstract; we know of life only in the shape of living individuals. And in speaking of the origin of the first forms of life we must postulate *the simultaneous beginning of a sufficient number of diverse forms of both plants and animals to make a balanced web of life,* so that under the principle of interdependence a sufficient variety would be in existence to make *a balance* among all the various forms. These original groups, which must have been simultaneously started at some one time, in order to insure the continuance of the organic world as a going concern, could not, it seems to me, have been anything less than the *families.*

It is interesting to note that Dr. H. B. Guppy, the English botanist, advocates almost the very same thing. This view, as stated and indorsed by Dr. J. C. Willis, in his recent book "Age and Area" (1922), is that: "Evolution did not proceed from individual to variety, from variety to species, from species to

genus, and from genus to family, but inversely; the great families and genera appearing at a very early period, and subsequently breaking up into other genera and species."—*Page 221.*

J. P. Lotsy, in his cleverly written and racy volume, has shown how much can be explained on the principle of hybridization. If we put this with the theory of Guppy and Willis, and with all that we have learned about Mendelism, it seems to me very easy to account for all our present diversity of plants and animals. Only, we must suppose a real creation for all the great original families, both of the plants and of the animals.

Says D. H. Scott, in his latest book, "We know nothing whatever of the origin of the angiospermous families, so the field is open to speculation."—*"Extinct Plants and Problems of Evolution," 1924, p. 217.* No; not to speculation, but to a belief in a real creation, as described in the first chapter of the Bible.

For if this is true of all the angiosperm plants, it is just as true of all the other families of the plants, and equally true of the family types among the animals.

The absolute necessity for such a primal creation will appear more evident after we have considered the modern discoveries in geology, which will be presented in Chapters V and VI.

Preferring Speculation to Experimentation

Before closing this chapter it will be well for us to look briefly at the two opposite views regarding Mendelism. The one side are saying in a mournful tone that Mendelism has proved a sore disappointment, so far as helping to a better understanding of organic evolution is concerned.

As an example of this side, we may take the following from Prof. E. W. MacBride:

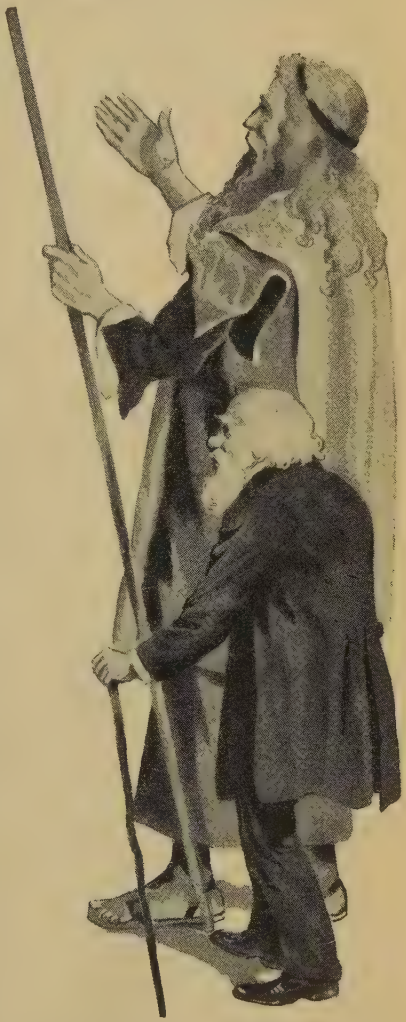
"I well remember the enthusiasm with which the Mendelian theory was received, when it was introduced to the scientific world in the early years of this century. We thought that at last the key to evolution had been discovered. As a leading Mendelian put it, whilst the rest of us had been held up by an apparently impenetrable hedge; namely, the difficulty of explaining the origin of variation, Mendel had, unnoticed, cut a way through. But, as our knowledge of the facts grew, the difficulty of using the Mendelian phenomena to explain evolution became apparent, and this early hope sickened and died. The way which Mendel cut was seen to lead into a *cul-de-sac."—Science Progress, Jan., 1922, pp, 255, 256.*

The article from which this excerpt is taken was written in

criticism of some previous ones by Julian Huxley. Recently Professor Huxley had an article in *Nature*, in which he pays his compliments to the opponents of Mendelism as follows:

"It is a matter of constant surprise why many who profess themselves Darwinian of the Darwinians should not only not avail themselves of the new tool [Mendelian breeding], but also evince a positive hostility to it. The new principles are, indeed, the only tool we at present possess which is capable of putting evolutionary theories to experimental test. Yet, with a few honorable exceptions, most taxonomists and 'evolutionists' prefer to stick to speculative methods—speculative because incapable of being tested either by experiment or by calculation—and make no attempt to use the new principles in experimental attack — or, for that matter, even in interpretation."—*Nature, April 12, 1924.*

There we have the whole present situation. Certain men who are intensely interested in trying to prove organic evolution complain that Mendelism has led them only into a *cul-de-sac*, a blind alley; and they repudiate all breeding tests, preferring to "stick to speculative methods," which are "incapable of being tested either by experiment or by calculation." The advocates of Mendelism say, on the other hand, that this new method of experimental breeding is "the only tool we at present possess which is



The speculations of Darwin are dwarfed beside the Heaven-sent wisdom of Job

capable of putting evolutionary theories to experimental test."

But I think the enemies of Mendelism are wise. They have tried Mendelism as a key to organic evolution, and have found that by its assistance they are only running up a *cul-de-sac*, a blind alley. Hence they have become cautious; they prefer to "stick to speculative methods."

Shall we not do well to say that modern biology is proving the utter bankruptcy of the theory of organic evolution?

"We cannot see how the differentiation into species came about. Variation of many kinds, often considerable, we daily witness, but no origin of species. . . . Meanwhile, though our faith in evolution stands unshaken, we have no acceptable account of the origin of 'species.'"—Bateson.

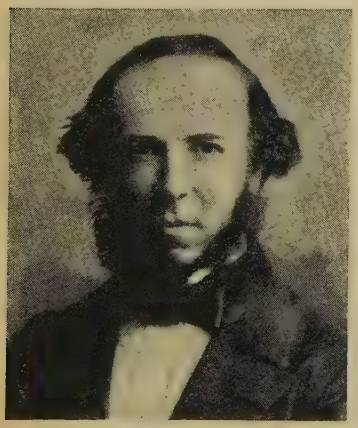
Chapter Four

The Historical Background

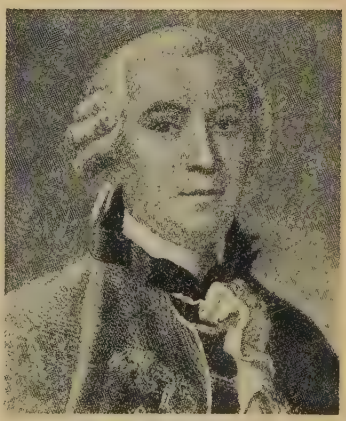
HERBERT SPENCER has advised us to look carefully into the history of an idea, if we wish to understand it fully. In no instance is this advice more sound than in the case of the evolution doctrine.

The evolution theory in its more vague and purely speculative form can be traced back to the old pagan Greeks. They believed fully in spontaneous generation and in all kinds of wild nonsense; why then should they not let their fancies run riot concerning the origin of plants and animals, especially since they knew nothing of a real revelation from the only Being who really knows anything first-hand about the beginnings of things?

In its modern, quasi-scientific form the evolution theory may be dated from about the time of Buffon (1707-88), a man "whose genius," as Marcus Hartog remarks, "unballasted by an adequate knowledge of facts, often played him sad tricks." He taught that the environment brings about direct and measurable changes in the structures of plants and animals, and that these changes are faithfully passed along to the next generation. Thus



Herbert Spencer
(1820-1903)



Count De Buffon
(1707-1788)

he revived the idea, apparently first taught by Aristotle, that acquired characters are transmitted to posterity, an idea that it has taken many decades of research and experiment to banish from the realm of science; though it has finally gone into the limbo of discarded fancies, along with perpetual motion and spontaneous generation.

In geology Buffon's theories were no better, though his precise program of seven successive "epochs" for the beginning, the past, and the future of our globe, had a considerable influence in the growth of the science of geology. In view of the scanty geological facts then at his command, we are disposed to think that he knew about as much about the future of the world as he did about its past.

Born in Skepticism

Erasmus Darwin (1731-1802) was a physician, was fond of natural history, and wrote large quantities of doggerel verse. He was the grandfather of Charles Darwin, and his own fanciful speculations about the evolution of plants and animals, developed throughout his writings, were undoubtedly familiar to his grandson. Erasmus Darwin got his idea of a natural development of the world, instead of its creation, from David Hume, the well-known Scotch skeptic, a very appropriate place to get it. Evidently Weismann's theory of the continuity of the germ-

Wide World Photos

A tree trunk that looks like a horse. Nature plays some strange pranks.

plasm and its unchangeableness might be extended into the history of ideas.

Erasmus Darwin was contemporaneous with Lamarck, and had much the same ideas about the effects of the environment being passed along to the next generation; though it seems that these two men were unacquainted with each other. He taught that the accumulation of these effects had brought about great changes in plants and animals, and that these changes had been going on "perhaps millions of ages before the commencement of the history of mankind." They would also continue into the future, as he said, "world without end."

Lamarck (1744-1829), the French naturalist, was regarded very lightly by his contemporaries. Even Charles Darwin could speak of him only with disdain; though ultimately he accepted Lamarck's theory of the inheritance of acquired characters to help out in his own theory of organic evolution. Lamarck's "thoroughly worthless speculation in chemistry and in other branches of science" (Osborn), was matched by his reckless fancies and his slovenly logic in dealing with the problems of heredity and adaptations among living organisms. But he lived in an atmosphere quite unfavorable to clear thinking regarding the deeper matters of the universe; and he gained some contemporary applause and much subsequent imitation for nearly a

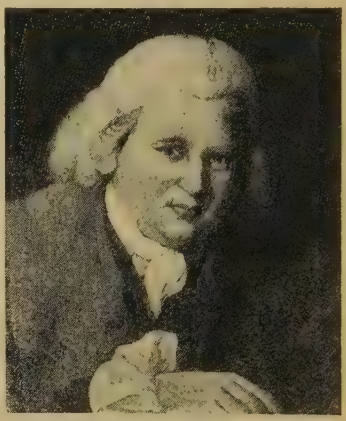
Wide World Photos

An onion that looks like a bird on a nest. Man must be careful or be deceived.

hundred years by advocating a pseudo-scientific method of accounting for the beginnings of things, in open opposition to the teachings of the Bible.

The Onion-coat Theory

Georges Cuvier (1769-1832) was by all odds the foremost naturalist and scientist of his day. He opposed the views of Lamarck, as well as all other forms of evolution hitherto proposed. He became master of practically all the various lines of science then understood, and by his own original researches he greatly extended several of them. Such was his overtowering genius and influence, that when he made a bad slip, as he undoubtedly did in his geology, the world was a long time in recovering from the blunders he had taught.



Erasmus Darwin
(1731-1802)

His contemporary, A. G. Werner(1750-1817), the mineralogist of Germany, was teaching the now notorious "onion-coat theory" of the rocks and minerals, as furnishing a true index to the history of the earth. Cuvier admired this scheme, and undertook to extend it to the fossils, conceiving that in the layers of water-formed rocks around Paris he could trace out a true history of the exact order in which the various types of animals had been created and in turn exterminated by successive world-catastrophes. Unconscious of the puerility of thus making these small, local beds of fossils in a little corner of Western Europe the infallible gauge or standard for all the rest of the world, he industriously worked out the typical "index fossils" for all the strata to which he had access. And it has taken the scientific world a full century to wake up to the idea that even the great Baron Cuvier was not endowed with any supernatural knowledge of the *relative order* in which these very same fossils might afterwards be found occurring on the other side of the globe.

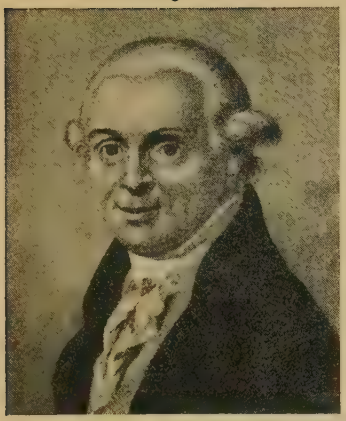
For a more extended study of this phase of the subject, the reader is referred to my various other books treating on geology.

Creation on the Installment Plan

Cuvier taught that there had been many successive world-catastrophes, by which all forms of life then living had been destroyed. Accordingly, he had to have an equal number of successive creations, each of these being on a little higher scale than the preceding. It was this series of successive creations that laid the real foundation for the modern theory of organic evolution. If the scientific world had not for fifty years been accustomed to this long-drawn-out process of a sort of creation on the installment plan, Darwin could never have gotten a hearing for any scheme of organic evolution. And to-day, with the collapse of all the biological evidences that have long been supposed to favor this theory, it is this *background of the long geological series* that makes such men as Bateson and D. H. Scott talk so naively about believing in the evolution theory as an "act of faith." For when these men uttered these remarks, they had not become acquainted with the exposure of the false logic and other kinds of blunders in this geological series, with which we are now familiar.

Georges Cuvier
(1769-1832)

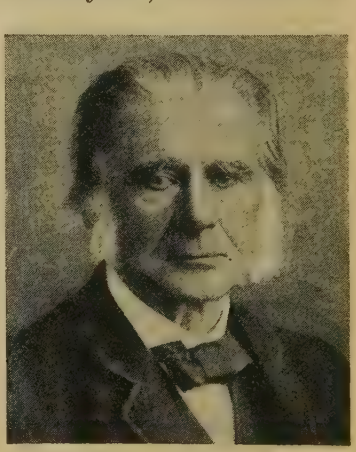
Charles Lyell (1797-1875) accepted Cuvier's scheme of the fossils as representing a true historical order; only he denied the many catastrophes, and said that the various groups of fossils had died out a few at a time, and that the entire geological changes had taken place by slow, gradual movements of the earth's crust. This system of geology is known as *uniformitarianism*, and is still very widely taught. We are not concerned here with the physical or strictly geological aspects of this theory; it is only its bearings on the development of organic evolution in which we are interested. But no wonder Huxley remarks that



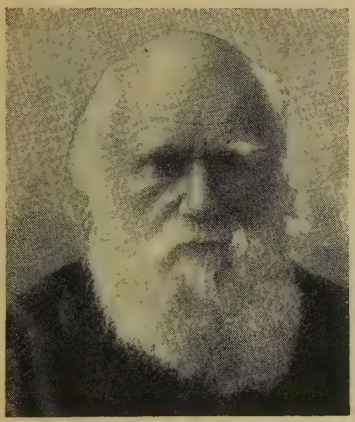
A. G. Werner
(1749-1817)

Lyell "was the chief agent in smoothing the road for Darwin. For consistent uniformitarianism postulates evolution as much in the organic as in the inorganic world."—*"Life and Letters," Vol. 1, p. 168.* In fact, Lyell's system of geology, which is the common or present-day system, *is merely the geological aspects of the general evolution doctrine;* and any one shows a lack of mental clearness who accepts the serial arrangement of the fossils taught by Lyellism, and yet refuses to believe in organic evolution *somehow.*

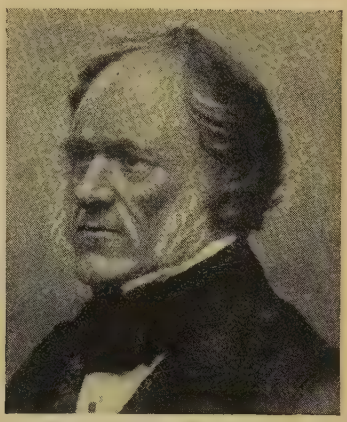
Thus before the middle of the nineteenth century a system of evolutionary geology had become almost universally accepted by the scientific world. Charles Darwin (1809-1882) merely undertook to fill in the details, by attempting to show how *species* originate. If he and A. R. Wallace (1823-1913) had not proposed their theory when and how they did, it is almost certain that somebody would have done so sooner or later. For the scientific situation then existing called loudly for something of the kind. When the scientific world goes running off the main highway of truth, the only thing that will convince them that they are traveling up a blind alley, is to follow up the trail to the very end. In the preceding chapter we have seen that the biologists are beginning to recognize that they are about at the end of their blind alley. In the following chapter we shall see that the evolutionary geologists are in



Thomas H. Huxley
(1825-1895)



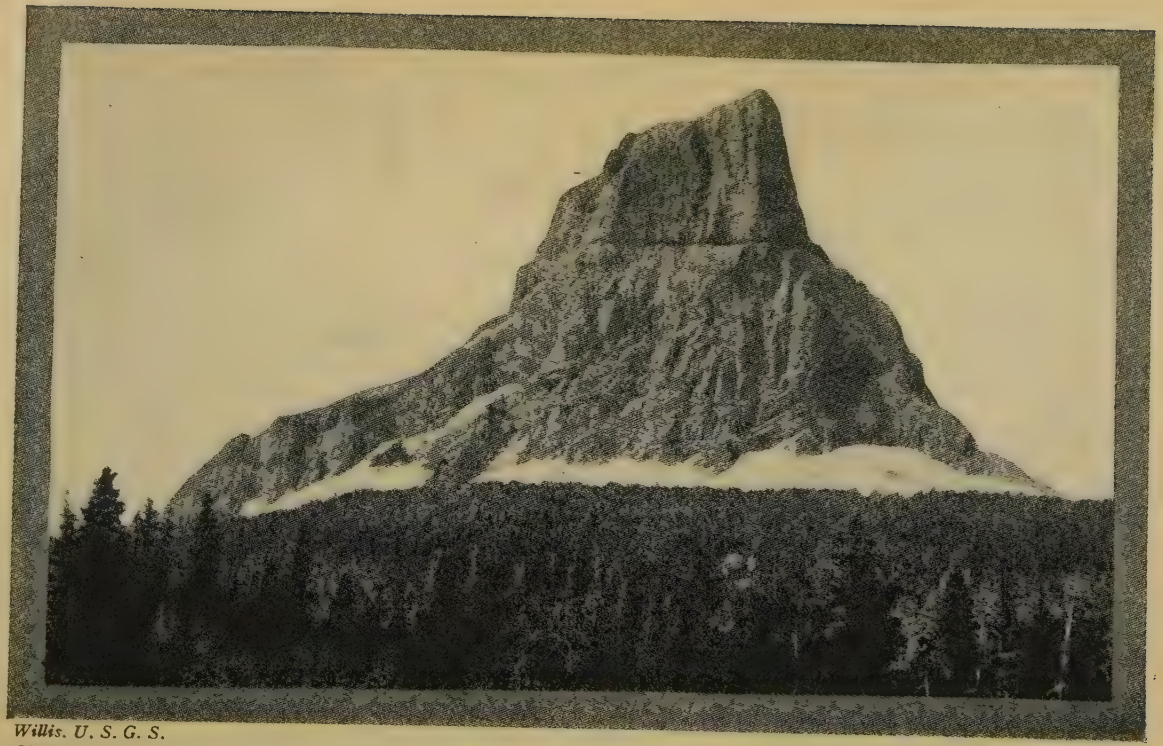
Charles Darwin
(1809-1882)



Sir Charles Lyell
(1797-1875)

even a worse predicament. Accordingly, the whole scientific world is now (more or less blindly) hunting around for the lost highway, which they left a hundred years ago under the brilliant, but nevertheless mistaken, leadership of Baron Cuvier.

The parts of the theory of organic evolution which were contributed by such men as Louis Agassiz, Herbert Spencer, Ernst Haeckel, August Weismann, and others, need not detain us here.



Willis, U. S. G. S.

Chief Mountain, Montana. Its top is composed of Algonkian rocks, its lower part is Cretaceous. All of Glacier National Park, of which this is a part, shows a similar anti-evolutionary sequence. See p. 38.

Chapter Five

Voices from the Rocks

THERE was a time, not so very many years ago, when most scientifically educated people could hardly resist the idea that there must have been some sort of evolution or development among the animals and plants that have peopled the globe. It was not that we could stand the skeleton of a gorilla or a chimpanzee alongside that of a man and show that every bone in the one is duplicated in the other. We can still do that. And we can make a very similar comparison between a Ford and a Cadillac. It was not that we can compare the human embryo in its development with the embryos of the ape or the dog or the rabbit, and show that the human body is made in very much the same way as that of these and other animals, and has about the same parts *plus* some extras. The Cadillac is manufactured in much the same way as the Ford; for the effort is made to construct each in the most efficient manner possible. It was only because of slovenly thinking, or because of the charlatanic propaganda of such men as Haeckel, that any one ever regarded such comparisons as genuine proofs of organic evolution.

But for any one who was acquainted with the geological series, and who could trace out the gradually ascending and developing fossil types of the plants and animals, it was hard to resist the conviction that the modern kinds of organisms have come about by some process of natural development prolonged over many millions of years. It was this which, as Thomas Hunt Morgan declares, has always been "by all odds the strongest evidence that we have in favor of organic evolution."—"*A Critique of the Theory of Evolution*," *p. 24*. It is certainly a historical fact that Darwin's misplaced confidence in the geology of Lyell was the chief inciting cause for leading him to invent his theory of organic evolution.

New Facts in Geology

But with recent years developments have come about in geology which completely demolish this by all odds "strongest evidence," and leave us in a most surprising manner face to face

with a real creation as the only adequate explanation of the origin of the forms now peopling the earth.

First came the proofs that in many places all over the globe the layers of rock contain fossils in the direct reverse of the evolutionary order, those that had long been regarded as "old" index fossils being found in the *upper* layers, while deep down *underneath* them were other fossils long regarded as immensely "younger." The whole of the Glacier National Park and a large portion of southern Alberta constitute one such area, where the so-called "young" fossils were deposited first, while other fossils called immensely "older" are laid down on top of them. This made it appear that there must be something radically wrong with the chronological scheme that, for over a hundred years, the evolutionary geologists have taught us represents an accurate time-record of the relative order of sequence in which each particular type of life came into existence. The suspicion began to arise that perhaps the Cambrian trilobites may not be really any older than the big dinosaurs, and the latter may not have been all killed off when the big elephants and megatheriums roamed around over America and Europe.

International

Stand a man and a gorilla side by side, and every bone in one can be duplicated in the other.

Other discoveries rapidly confirmed these suspicions, until now we know that this elaborate time-scale

with which the world has become so familiar, is really a big blunder after all, so far as showing any definite differences in the ages of these fossils. These fossils certainly represent ancient forms of life, they actually lived and their bodies were evidently buried by flowing water. But there is no scientific method by which we can tabulate these fossils off in successive ages; for all these animals and plants may very likely have lived *contemporaneously*. On this theory, the geological formations merely represent ancient floras and faunas, buried in some way, but certainly not in the long-drawn-out series which evolutionary geology has taught us to believe.

For instance, the English and Pennsylvania coal beds are not certainly and necessarily any older than the Cretaceous coals of Alberta and British Columbia, or than the Tertiary coals of Germany and Australia. It is entirely possible and probable that the plants that helped to make these different coal beds may have lived contemporaneously in these widely separated localities. It is entirely possible and probable that the trilobites may have been living in the ocean while the dinosaurs and the mastodons and mammoths were running around on the lands of America and Europe. And every one who has kept up with modern discoveries in geology knows that it is now impossible to prove that they *could not* have lived thus contemporaneously. As the burden of proof must always rest logically on the one who would wish to place the fossils in some sort of serial or chronological order, and as we now know that the long-trusted chronology hitherto in vogue has broken down completely, we may rest assured that no other plausible chronology is likely to be attempted. Accordingly, we may conclude that the evolutionary scheme of geology, this by all odds "strongest evidence" in favor of organic evolution, has broken down entirely.

"Facts" that are not Facts

One of the most widely used books in favor of organic evolution is the one by Prof. H. H. Newman, of the University of Chicago, entitled: "Readings in Evolution, Genetics, and Eugenics" (1922). It is a sort of compiled scrapbook of elaborate extracts from the leading evolutionary writers, with occasional chapters or parts of chapters by the compiler. The chapter on the "Evidences from Paleontology" has a subdivision

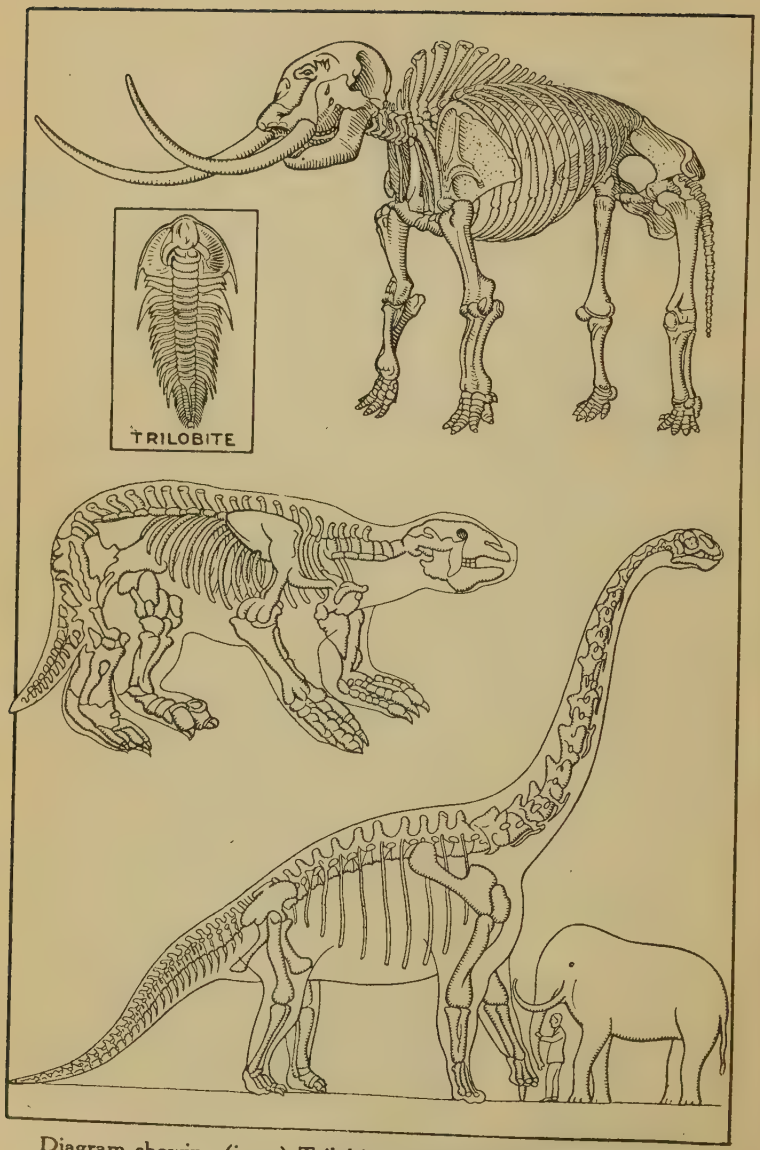


Diagram showing (inset) Trilobite, (upper) Mastodon, (middle) Megatherium, (lower) Dinosaur compared with elephant.

entitled, "The Principal Facts Revealed by a Study of the Fossils." Under this we find a list of ten alleged facts (pp. 69, 70), which it may be worth our while to study in some detail, as these alleged "facts" are typical of a great deal of the misinformation that is commonly passed around in support of the doctrine of evolution.

I shall give these ten alleged "facts," as stated by Professor Newman, commenting upon each as we pass along.

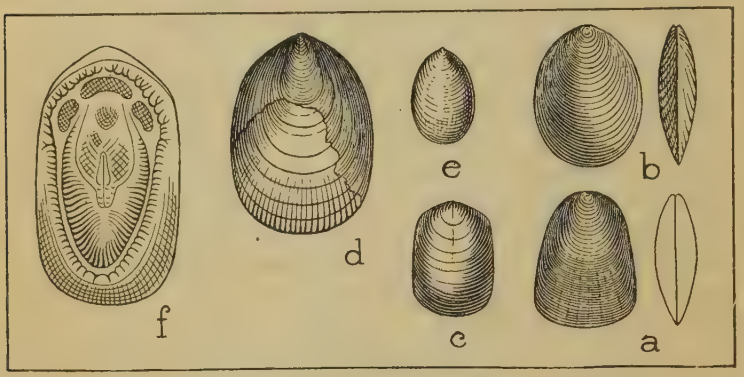
"1. None of the animals or plants of the past are identical with those of the present. The nearest relationship is between a few species of the past and some living species which have been placed in the same families."

If Professor Newman were as well acquainted with geology and the fossils as he appears to be with modern breeding experiments, he would never have made such a statement. Of course, there are species and "species"; and if we hold to the now antiquated dictum of Cuvier that *all* the fossil forms are "extinct" species, such a statement might not appear so ridiculous. Apparently many students of the fossils are still working on the supposition that anything that can be distinguished from other similar types is a "species." But this is mere quibbling. Thousands and tens of thousands of forms found as fossils in the rocks are sufficiently like their living representatives to warrant us placing them, not merely in the same "families," as Newman says, but in the same *genera*, and even often in the same species. Several species of fossil bears are now admitted by good authorities as identical with our modern ones; the mammoth and several other fossil elephants can only with difficulty be distinguished from the modern Indian elephant; the big fossil hippopotamus found in many parts of England and western Europe is essentially identical with the modern one now living in the tropics.

If I had the space (and my readers had the patience), I could go clear down the line to the little shellfish, such as the pretty little brachiopod, *Lingula*, which belongs in the Cambrian formation, and which is found fossil in the cliffs around the Gulf of St. Lawrence, while "from the sand at the foot of the cliffs we can dig out living specimens of *Lingula;* and if we examine the fossil shells and those of the living animal with the minutest care, we would not be able to detect the smallest difference, down to the

finest striæ, between them."—*Geoffrey Smith, "Primitive Animals," pp. 80, 91.*

This author, from whom I have just quoted, is a well-known professor in Oxford University, and the book from which I quote is issued by the Cambridge University Press. Many other prominent scientists could be cited as declaring that multitudes of the fossils are so nearly like the living representatives that the two



A group of Paleozoic Lingulas

can be distinguished only with difficulty, it being a general rule that the fossil kinds are often larger.

The only comment that we can now make upon the statement given by Professor Newman, is that *it is not true.*

But we must pass on to his second "fact."

"2. The animals and plants of each geologic stratum are at least generically different from those of any other stratum, though belonging in some cases to the same families or orders."

Of course, he is here using the word "stratum" in the sense of "formation," a peculiar or misleading use of the term.

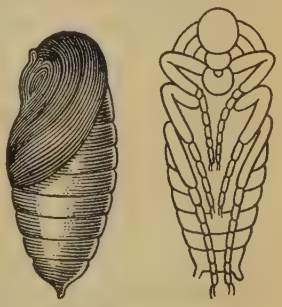
But if this second statement means anything more than his first one, it would seem to mean that no fossil animal or plant is ever found in two separated formations, or in two different subdivisions of the geological series. This is so absurdly false that I cannot understand how any well-informed man could have permitted himself to put such a statement on paper. If he should limit his statement to what are termed "index" fossils (which he does not), it would still be grotesquely untrue. So let us proceed.

"3. The animals and plants of the oldest (lowest) geologic strata represent all of the existing phyla, except the Chordata [about equivalent to the Vertebrates], but the representatives of the various phyla are relatively generalized as compared with the existing types."

Of course they are "relatively generalized" or simple in structure; for that is the chief *reason why* they are classed as "oldest." Every person acquainted with geology in its modern form knows that there is no physical reason for calling the Cambrian or Ordovician "lowest" or deepest down in the earth, or for calling the Cretaceous or Tertiary "highest" or nearest to the top of the ground. We have long ago discarded the "onion-coat" theory; and we all know that these formations occur only as local, detached masses of rock here and there, and are artificially arranged in the geological series from these scattered localities. In other words, *there is no spot on earth where more than two or three of the geological systems are ever found one above another.* The geological series is a purely artificial series, made by the geologists in their libraries. And the very reason why certain fossils are placed in the Cambrian, or "oldest" group, is this very fact that they are "relatively generalized" or simple in structure.

Why then should we be treated to this begging of the question by having evolutionists bring these "generalized" types as proof of their theory?

However, the geologists have not always been willing or able to shift the beds up or down, so as to make them conform to the evolutionary scheme. Fossil botany is much more of an exact science than is fossil zoology; for in the latter science we are generally limited to our study of the bones or the hard parts of the animals, while in fossil botany we have recovered thousands of specimens where by thin sections we can study the cellular structure of seeds and stems in a way that makes us even more certain of our results than we could ever have been by examining such structures as the leaves. It is on such incontestable evidence as this that the students of fossil botany are now telling us that the plants that



A pupa-shell

have been assigned to the Paleozoic are really not so "primitive" after all. This is what D. H. Scott says on this subject:

"The average level of the lycopods [club-mosses] of the Coal Age [Carboniferous] was altogether far higher than that of the same group in our own time."—*"Extinct Plants and Problems of Evolution" (1924), p. 147.*

"Thus the Carboniferous representatives of the horsetails, like the corresponding club-moss allies, were in every respect more highly organized than their modest successors in the living flora." —*Id., p. 148.*

"Some of the most complicated seeds known are of Paleozoic age. . . . The seed, in fact, may be said to have reached its zenith of complexity in Carboniferous times; subsequent changes have been, on the whole, in the direction of simplification."—*Id., p. 139.*

Comment on this modern, thoroughly reliable information from one of the greatest authorities on fossil botany in the world, is quite unnecessary. Let us proceed with Professor Newman's fourth "fact."

"4. The animals and plants of the newest (highest) geologic strata are most like those of the present and help to link the present with the past."

The very *reason why* the Tertiary strata were originally called the "newest" or "youngest" by Buffon and Cuvier, was because their fossils were thought to be "most like those of the present." Lyell also arranged the subdivisions of the Tertiary on the very same principle. This is manifestly reasoning in a circle. Accordingly, what value can we place on the present use to which the evolutionists are putting the results of such an arrangement?

"5. There is, in general, a gradual progression toward higher types as one proceeds from the lower to the higher strata."

No doubt there is this "gradual progression" in the geologic series as a whole; but as already remarked, this is a purely artificial arrangement. Why not? Have not the geologists of five continents for nearly a hundred years been diligently at work in perfecting the geological series by putting all the newly found strata each in its proper pigeonhole? In reality, the geological series is just as much a schematized or artificial arrangement as is the card catalogue of a library. And as it would be folly for a bibliophile solemnly to declare that all the books under *A*, *B*, and *C* were published first, and those under *X*, *Y*, and *Z* were issued last; so it is a mere trying to deceive the public for any one in these days to tell us that the geological series from the

Cambrian to the Pleistocene *represents a real physical relationship of the various formations*, the former at the bottom and the latter at the top.

"6. Many groups of animals and plants reached the climax of specialization at relatively early geologic periods, and became extinct."

Many kinds of life are really extinct; others are called "extinct" because for years geologists have made it a point to

International

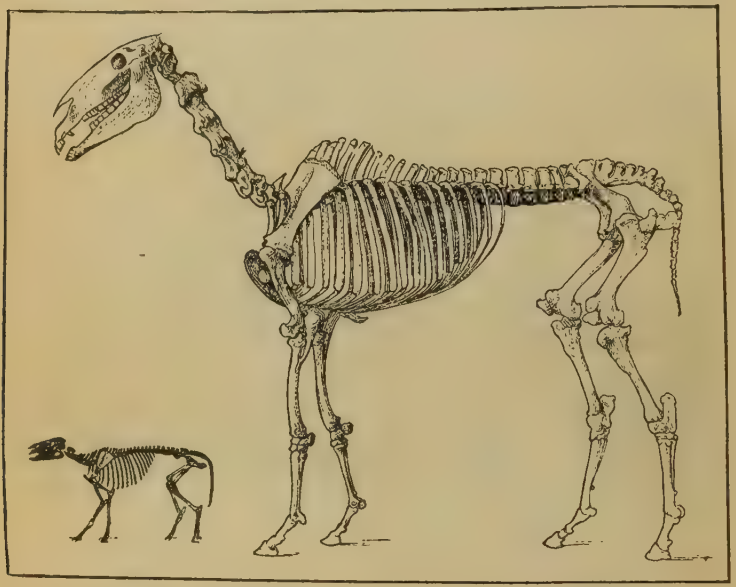
A "reconstructed" animal of prehistoric times

give a *new name* to all forms found in the so-called "older" rocks, so as to avoid the disagreeable confession that thousands of the fossils of the Paleozoic and Mesozoic strata are like their living representatives. As for those that are really extinct, like the trilobites and the dinosaurs and the mastodons, with many others, the evolutionists have always wanted to have them become extinct a few at a time; otherwise the catastrophic nature of the geological changes would appear too plainly and unavoidably.

"7. Only the less specialized relatives of the most highly specialized types survived to become the progenitors of the modern representatives of their group."

By this Dr. Newman means that the modern birds, or reptiles, or fishes are not descended from the more highly specialized

birds, reptiles, and fishes of the long ago, but are to be traced back to lower representatives of these classes. Exactly so; for in every one of these groups and, in almost all the others, for that matter, there are representatives found fossil that are larger and better developed, often even more "specialized" structurally, than any now alive. Would the reader not have



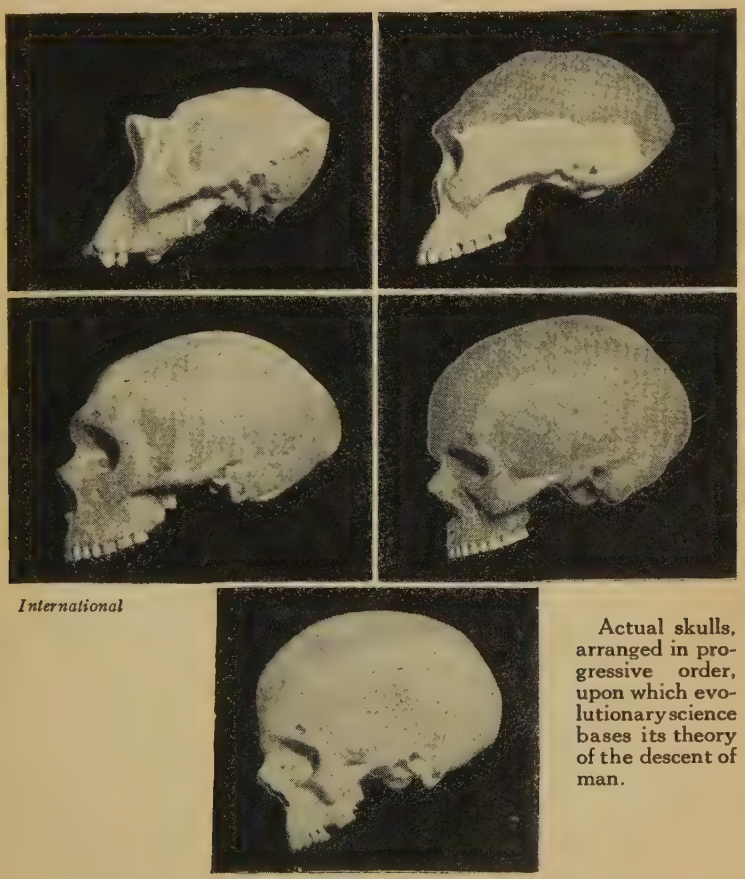
The horse of the present and the "horse" of the past

supposed that the evolutionists would mention this fact with an *apology*, instead of trying to work it in as *evidence* for evolution, as Newman has done?

"8. It is very common to find a new group arising near the end of some geologic period during which vast climatic changes were taking place. Such an incipient group almost regularly becomes the dominant group of the next period, because it developed under the changed conditions which ushered in the new period, and was therefore especially favored by the new environment."

Naturally enough, with an artificial series like that of the fossils, it would never do to have the newly introduced types start too abruptly; some "incipient group" ought to be found to

make the transition easy and natural. As for the alleged "vast climatic changes" spoken of by Newman, we do know of *one* such change of climate, in passing from the ancient (fossil) world to the modern. As A. R. Wallace has stated it, there is one "uniform climatic aspect of the fossils"; while the passage from that wonderful, springlike climate to our modern extremes, is shown well enough by the fossil elephants found in such numbers in cold storage in the extreme north of Siberia. Here is one sudden and tremendous change of climate; but there is *no other* change of climate known to geology, except that many have



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Actual skulls, arranged in progressive order, upon which evolutionary science bases its theory of the descent of man.

tried to invent other climatic cycles, so as to make their "glacial age" appear like a regularly recurrent affair.

For a full discussion of this matter of climate, I would refer the reader to the monumental works of Sir H. H. Howorth, "The Mammoth and the Flood," "The Glacial Nightmare and the Flood" (2 vols.), and "Ice or Water" (2 vols.), also to my own "The New Geology" (1923).

"9. The evolution of the vertebrate classes is more satisfactorily shown than that of any other group, probably because they represent the last phylum to evolve, and most of their history coincides with the period within which fossils are known."

Dr. Newman here has in mind the well-known pedigrees of the horses, the elephants, and the camels, as shown by casts and diagrams in the American Museum of Natural History, New York City, as well as in other museums, and by cuts in various books on evolution.

Only two facts need to be borne in mind in this connection:

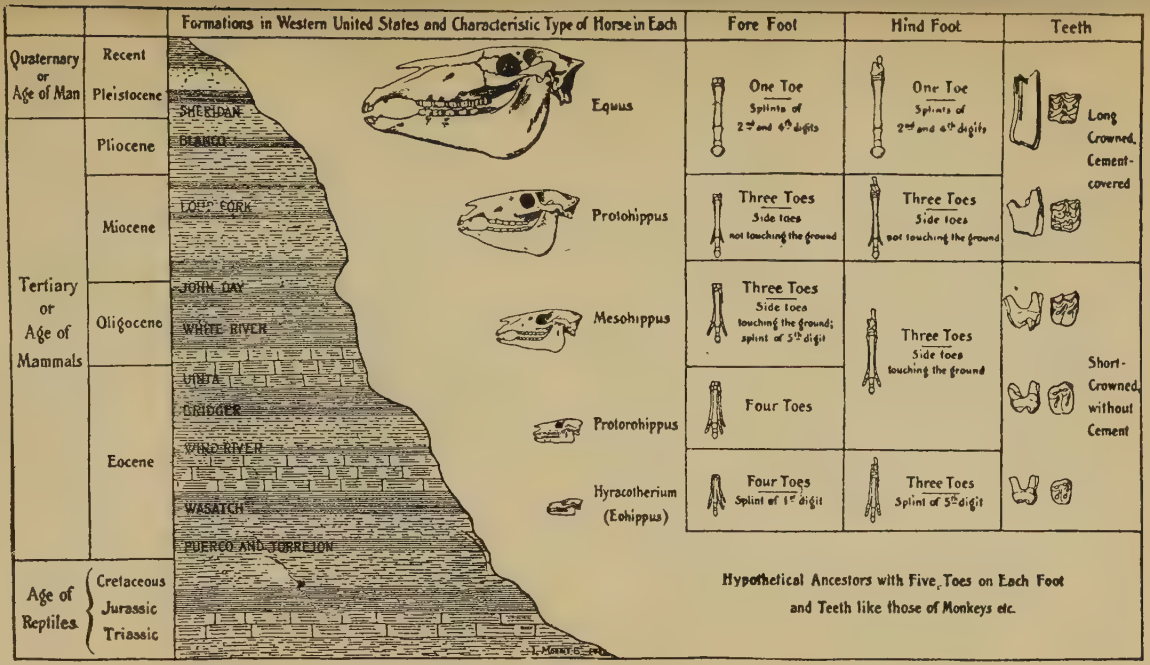
(1) In such a series as that of the horses, several of the specimens shown in the series can only be called *horses* in the same accommodated sense that the tapir is a "horse," or the hippopotamus is a "pig," or the hyena a "dog." Some of them do not resemble the horse as much as the hyena resembles a dog.

(2) As all the other parts of the geological series are artificially arranged, so are these subdivisions of the Tertiary system, where these fossil "horses" are found, even more artificial, if possible, than the subdivisions of the other systems.

No; these artificial arrangements of the fossils in the museums may deceive the millions of little schoolchildren who visit these institutions under the guidance of their teachers to study these wonderful "proofs" of organic evolution. But I do not feel free to express the thoughts that such methods of propaganda arouse in the minds of those who really know the facts in the case. Why should we all have to keep paying taxes to have our children deceived in this fashion?

"10. Most of the invertebrate phyla had already undergone more than half of their evolution at the time when the earliest fossil remains were deposited."

Dr. Newman is here trying to apologize for the fact that, even with the entire world to pick from, and with a perfectly free hand in arranging all the fossils from any part of the globe,



The Evolution of the Horse

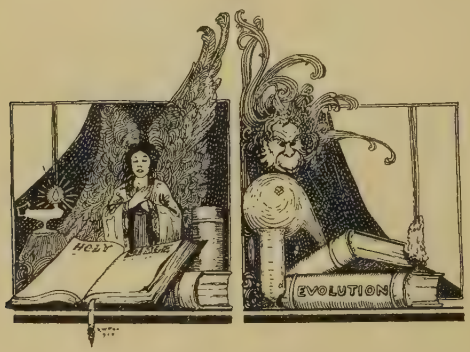
One of the important facts to bear in mind when examining such a diagram as this, is that the formations here represented as superimposed upon one another, are not found thus in nature,—this is a purely artificial arrangement, made up from widely scattered formations, with nothing whatever of actual fact to forbid the idea that all these so-called "horses" were really living contemporaneously. Even the modern horse, *Equus*, is also found as a true fossil, along with the others, and became extinct in America (as far as we can tell) at the very same time as all these other animals, with the mammoth also, and the rhinoceros, the camel, the saber-tooth tiger, and the megatherium. This is a purely artificial table, designed to deceive only the ignorant. It is reproduced from the publications of the American Museum of Natural History, New York City.

evolutionary geologists have never yet succeeded in making a *good start* for their scheme of organic evolution. They still have to start not with one line of living forms, but with *several;* and the first of each of these lines is as well developed a representative of the line as would be a corresponding specimen of to-day.

The following from Prof. A. H. Cook, in the third volume of the "Cambridge Natural History," will suffice on this point:

"The first undisputed traces of animal life, which appear in the Cambrian epoch, exhibit the same phyletic distinctions as now exist. Sponges, echinoderms, mollusca, and worms, formed already, in those immeasurably remote ages, groups apparently as generally distinct from one another as they are at the present time."—*Page 5.*

We have now examined briefly the ten precious "facts" with which one of our modern scientists seeks to state the evidences in favor of organic evolution that are to be drawn from geology. And yet Morgan has told us that the geological evidence is "by all odds the strongest evidence that we have in favor of organic evolution"!



Chapter Six

Degeneration

A HUNDRED years ago nearly all zoologists and botanists, under the influence of Baron Cuvier, taught a very extreme view of the "fixity" of species. Even fifty years later, in the time of Louis Agassiz, we find the same unreasonable prejudice against admitting the possibility of any noticeable changes among plants and animals since they were originally created. It was because of this doctrine of the extreme "fixity" of species that Cuvier declared *all* the fossils, without exception, to be "extinct" species. It was in the same narrow spirit that Agassiz declared that all the blind fishes found in caves "were created under the circumstances in which they now live, within the limits over which they now reign, and with the structural peculiarities which now characterize them."

Linnæus (1707-1778), from whom we get our method of the scientific naming of plants and animals, was somewhat less extreme, for he allowed for the effects of degeneration and for those of hybridization. He adopted the word "species" to represent all the individuals which he thought had descended from an originally created pair of animals or an original stock of plants. In the long lapse of time since his day, his names of "species" have in great multitudes of cases been elevated to generic rank, with consequent splitting up into more minute subdivisions, called also "species." Whereas Linnæus declared that the botanist ignores minute varieties, the recognition of these minute varieties and the dignifying of them with specific names has gone merrily on both in botany and in zoology; with the result that, as a general thing, the "species" of Linnæus would correspond about with our "genera."

The Mania for Creating Names

Some fifty years ago, Professor Jordan, a French botanist, gave a strong impetus to this mania for creating new names. He undertook to determine by experiment just how minute are the varieties that will continue to breed true to seed. He found that as a general rule those "minute varieties" which Linnæus

had determined to ignore, would continue to come true to seed, just as surely as would the ones which Linnæus had called "species."

Thus for the last half century or so we have had to deal with two kinds of species: (1) the species of Linnæus, or "Linnæan species," and (2) those of Jordan, or "Jordanian species," the latter being also called "physiological species."

This work of Jordan was long before the rise of Mendelism. With the great stimulus which the latter system has given to breeding experiments, still more minute subdivisions are now found also to keep true to the original type. For example, the U. S. Department of Agriculture recognizes 250 kinds of wheat, "all of which breed true," as Hall and Clements remind us, "and would thus come to be species," if we were to follow Jordan. The authors just quoted from are urging a return to the conception of Linnæus, and a reversal of the mania for "splitting" which has prevailed for over a generation. They declare that, "if taxonomy is to be either stable or usable, it must rest upon the species concept of Linnæus and the practice of eminent taxonomists from his time to the present."—"*The Phylogenetic Method in Taxonomy*" (*1923*), *p. 15. The Carnegie Institution of Washington.*

Box-within-a-box

It would thus appear that we have arrived at a sort of box-within-a-box notion of our units of classification. The minute units of Jordan will breed true, as will also the larger units of Linnæus. Even the latter may not be large enough to include all that have descended from common ancestors. In Chapter III we have seen how H. B. Guppy, the English botanist, advocates the idea that the great families and genera must have appeared first, some time in the long ago, "subsequently breaking up into other genera and species." This view is being strongly supported by many prominent scientists, and appears to me to be in harmony with all that we now know regarding these matters.

Species are evidently not absolutely unchangeable, as was long taught by both scientists and theologians. But before asking ourselves whether the general tendency of these changes which we admit has been upward or downward, we must note some general facts bearing on the subject.

Underwood

The wilderness of Sinai showing desert vegetation

Many of my readers are doubtless familiar with the very striking and characteristic types of plants found in the desert parts of the United States. But they are not confined to these regions, any more than the blind fishes and crustaceans are confined to the Mammoth Cave of Kentucky. But as the blind animals found in the caves of Europe, of South America, and of Australia seem to be the modified descendants of the particular types represented in their own particular surroundings, so do the plants and animals of the desert parts of Africa, Asia, and Australia seem quite generally to be the greatly changed representatives of other plants and animals not greatly distant, but living amid more normal surroundings.

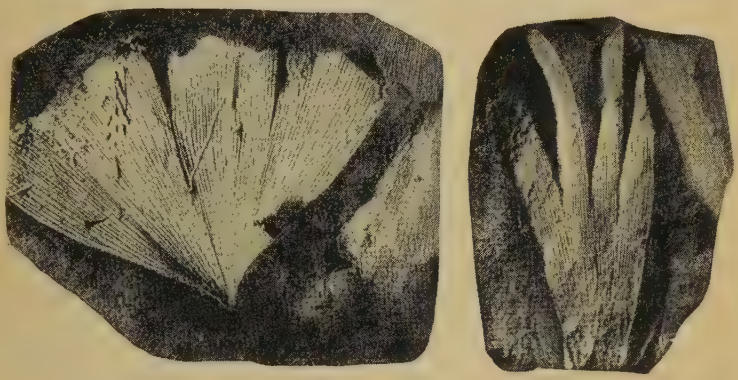
No Fossil Desert Plants

But it is a very remarkable and a very instructive fact that *the fossiliferous strata do not contain any traces of these desert forms.* If we judge the ancient world only by the plants and animals found in the stratified rocks, there were no deserts in existence, just as there were no extreme temperatures even in the arctic regions. Says Dr. D. T. Mac Dougal, Director of the Department for Botanical Research of the Carnegie Institution of Washington: "No fossil remains of desert plants have yet been recovered. Some of the forms which have the aspect of xerophytes [desert plants] must have grown in moist regions by reason of their method of reproduction."—"*Outlines of Geologic History, p. 297.*

Now it does not seem reasonable to me that these desert plants could have existed in the ancient world without leaving some fossils for us to discover. Nor does it seem reasonable that these plants were created after the great world catastrophe revealed by the New Geology, expressly for their present peculiar surroundings. The only other possible view is that these desert forms (and I would include the animals as well) are merely the modified descendants of some ancestral forms that were perhaps so different that they would pass as separate species, possibly as distinct genera. In other words, we are to suppose that some modern normal plants and animals and these peculiar desert kinds have both alike descended from some common originals.

Palms in the Arctics

Let us take another class of facts. Geology has very clearly proved that the world before the Deluge (I am now speaking in terms of the New Geology) had a very remarkably mild climate all over, that is, mild temperatures extended into the extreme polar latitudes. We find plenty of fossils of oaks, elms, birches, magnolias, grapevines, sequoias, even palms and other semi-tropical trees, away within the Arctic Circle. Not only so; but we also find many coral limestones in these localities, proving



Fossil palm leaves from Alaska, yet palms are tropical or semitropical.

that the ocean was as mild and warm as the land climate. Moreover, we find that these conditions prevailed without interruption throughout all the period of time shown by the fossils; as A. R. Wallace expresses it, throughout the entire geological series "we find one uniform climatic aspect of the fossils." This means that this mild, springlike climate prevailed uninterruptedly, until the great change came that brought in the modern conditions.

Accordingly, there must be many animals (and some plants) now living in the two polar regions which must have become greatly modified to adapt themselves to these new, strange conditions. We might regard the reindeer, glutton, and musk ox as having been originally adapted to the cooler mountain tops or tablelands of the ancient world. But, taken as a whole, we must suppose that our present floras and faunas of the polar regions are the modified descendants of other plants and animals of the

ancient world which were originally accustomed to vastly other environmental conditions.

From all this we are compelled to draw the same lesson that we have already drawn from a study of the denizens of the desert. In both extreme conditions we find a multitude of plants and animals that must have descended from others that were undoubtedly so different in both appearance and in habits that scientists would feel compelled to place the two in separate species, probably in separate genera. This conclusion seems to me unavoidable. Multitudes of living organisms have undergone very striking changes, in passing from the ancient world to our modern one.

The Origin of Human Races

Accordingly, we are compelled to believe in the origin of many distinct "species" by some sort of natural process within the period of time covered by human life; for it is a well authenticated fact that man lived before the great world-changes which are revealed to us by geology.

But some equally well established facts regarding the human race itself have a very important bearing upon the problem we are here considering. Fifty or seventy-five years ago, Louis Agassiz and many other scientists taught that the human race is not a unit, but that it is made from several original stocks. This is the theory of the Pre-Adamites, which was widely taught about the third quarter of the nineteenth century. We have discarded this error; yet the problem of the great diversity in the races of mankind is still unsolved. For several races of mankind are quite as distinct from each other as are many "species" among animals and plants. Undoubtedly there has been more mixture of these races of man than there seems to be now going on between the various species of animals and plants. But even among the latter many recent writers think that hybridization has played an important part in producing new "species."

But the problem now before us is, How did these distinct races of mankind originate in the first place?

The evolutionists try to solve this problem by postponing it. They push the origin of these races so far back into an imaginary past that the obscurity of the shadow acts as a substitute for clearness of thinking. But *time* is not the essential factor in the

case. Profane history in authentic form does not go back of about B. C. 3000. Yet back at this historic dawn we find the more distinct races of mankind pictured on the monuments of Egypt with all the exactness of form and even of color which are so well known to us to-day. Evidently the formation of distinct races had then *already taken place;* yet this is so early after the great world-disaster that one wonders how this separation into distinct races could have come about; and the five thousand years since that time seem to have added nothing to the distinctness of this separation.

Louis Agassiz
(1807-1873)

The Great Dispersion

The believer in the Bible will very reasonably connect this formation of the distinct races of mankind with the great Dispersion, as recorded in the eleventh chapter of Genesis. Such a segregation of mankind into several distinct races would assist in accomplishing the same purpose as the confusion of tongues and the compulsory dispersion of the separated units of the race, which was (as stated in the Bible) to insure the peopling of the entire earth, and to prevent the formation of a great, crushing, centralized world-despotism, which was even then threatening to stifle the free development of human liberty.

But these facts regarding mankind throw much light upon the problem of the origin of "species" among both plants and animals. It was a completely desolated earth that lay out before the survivors of that great world-disaster. Even the animals that had survived must have felt the extreme of hardship and privation, as they spread abroad. But —

> "The world was all before them, where to choose
> Their place of rest, and Providence their guide."

That tendency toward "adaptation" that we see everywhere among living organisms, could not fail to produce very

quickly great changes in the animals and plants, resulting in a great multiplication of different kinds, or "species" in the more restricted sense of this word. Just as we see millions of cells busily engaged in healing a wound or in combating a disease, so we know that this same Power behind nature was here intent on helping the world as a whole, which had been terribly wounded

Skull of the Cro-Magnon Man.

and was sick almost to death. Evidently it was in this way that much of the great diversity was produced which we see around us among the plants and the animals.

Down or Up?

But we must now inquire what the general tendency has been in these changes; has there been advancement or retrogression, development or degeneration?

Undoubtedly there have been great numbers of changes in both the animal and the vegetable kingdoms which are quite neutral in these respects. Many products of hybridization or of mutation cannot be said to tend either up or down. And yet, as we compare our present larger animals, such as the bear, the lion, the elephant, the hippopotamus, the elk, or the beaver, and hundreds of others might be mentioned, with those superb "giants of the prime" that we find as fossils in the Pleistocene beds of all the continents, we cannot be blind to the marked evidences of degeneracy among the modern kinds. This is not confined to the mammals; it is an almost universal phenomenon

throughout the animal kingdom. As Sir William Dawson has expressed it, "All things left to themselves seem to degenerate."

We meet the same tendency toward degeneration when we look at mankind, and compare the present with the past. True, we do not have as positive knowledge of the kinds of mankind that lived before the Deluge as we have of the animals. We do not have any fossil human remains that we can positively identify as representing the real antediluvian race. A few ambiguous specimens here and there need further confirmation. But we do have some splendid specimens of mankind very early *after* the great world changes represented by the geological deposits. The Cro-Magnon race, found in central France, were many of them six feet four or five inches tall, and splendidly proportioned, with noble skulls. Sir Arthur Keith declares that this race "was the finest the world has ever seen." H. F. Osborn recently declared that in native intellectual capacity they were doubtless equal, if not superior, to the best among modern peoples.

International

The Indian, Ka-Be-Na-Givey, said to be the oldest living man.

The Noble Ancients

These men were the wonderful artists whose carvings and paintings adorn the many ancient caves of southern France. In many of their surroundings and habits of life they were un-

Wide World Photos

Assembling the tail bones of a dinosaur

doubtedly what we would term barbarians; for they were living amid very hard and trying surroundings. But in native ability, both of body and of mind, they were among the select of all history, as is proved by their skeletons and their skulls.

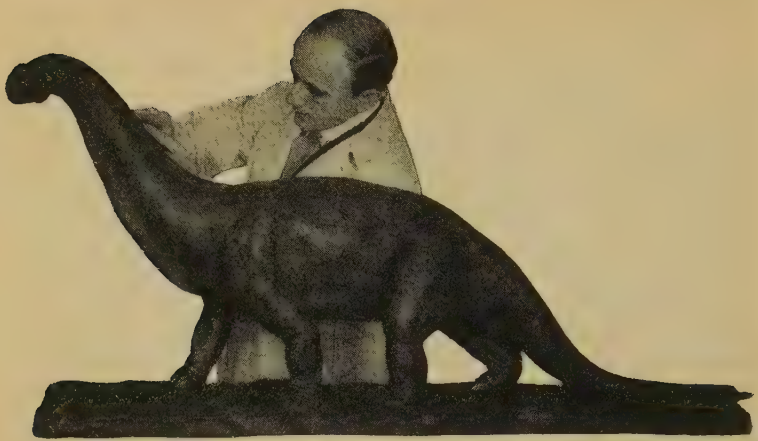
Such specimens as that of Neanderthal, Heidelberg, and Piltdown, were evidently the degenerate offshoots of this more favored race; and they may very likely have all lived more or less contemporaneously. At any rate, we know positively that the Cro-Magnon race was very ancient. There is much less evidence for the great antiquity of some of the others, except the degenerate condition of the jaws and skulls, which, though very strong evidence in the mind of an evolutionist, is hardly convincing to others. As for the notorious Java skull, I do not consider it either ancient or yet a human skull at all. It is probably the skull of a gibbon.

Regarding the Los Angeles skeletons recently discovered, we are not yet sufficiently familiar with all the facts involved to enable us to pronounce definitely.

But from all these facts, we learn that degeneracy and not progressive evolution has dogged the footsteps of all created forms, including man himself.

International

Skeleton of an ancient man unearthed in Nevada.



International

One of the "reconstructions" of the scientists.

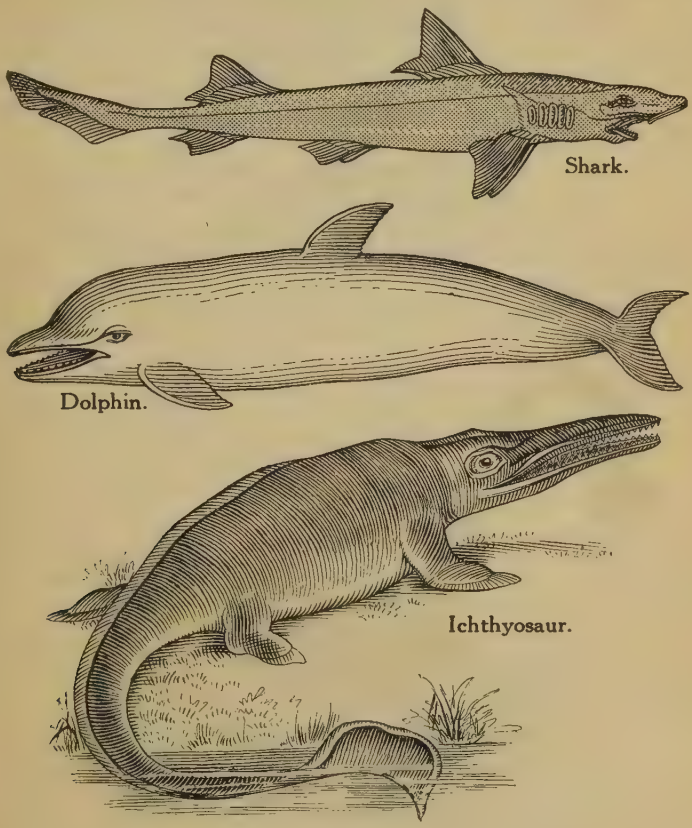
Chapter Seven

Facts and Fancies

SCIENCE has advanced chiefly by means of observations and comparisons. Unfortunately, it is notorious that good observers of the facts of nature are often very poor reasoners regarding these facts. The power to reason correctly regarding a large mass of facts seems to be given to only a few people in each hundred years or so in human history. The drawing of correct conclusions from observations and comparisons is subject to rigorous laws of logic, a primary necessity to which, as Bateson says, the early evolutionists paid small heed. "For them the unknown was a rich mine of possibilities on which they could freely draw." As we shall see presently, most of the blunders made by Darwin and his followers were due to drawing hasty conclusions from wholly insufficient data. And in no department of the general subject was this weakness more manifest than in comparing the structure of one animal with that of another, and concluding from the similarities thus discovered that the two animals must be related to each other by having had common ancestors.

But our increasing knowledge of the structures of birds, fishes, reptiles, and other animals, has brought to view thousands of organs in these various animals which are more and more a

perplexity to the evolutionists. For after there has been fixed upon in one animal some particular organ that is like that in another, and this similarity has been urged as a proof that these two animals are blood relatives, an almost identical organ has been found in some other animal where any claim to a common ancestry would be absurd. This has occurred over and over again so many times that the evolutionists have invented the theory of "parallel development"; and so they say that these similar organs, perhaps in three or four kinds of animals that common sense tells us cannot be related by a common descent, have been evolved separately, that is, have been evolved these three or four times quite independently of each other.



Scientific Sidestepping

For instance, we have the shark, the ichthyosaur (an extinct kind of fish-shaped reptile), and the dolphin (a true warm-blooded mammal, and not a fish at all), all of which greatly resemble each other in external shape and general appearance. Each has the same long, sharp snout, the same powerful tail, the same general fishlike shape. And yet the first of these is a true fish, the second was just as true a reptile, while the third is a mammal, bringing forth its young alive and feeding them by milk, just as does a cow or a horse, though it lives in the sea.

Here the evolutionists have to say that this peculiar shape and general form has been evolved separately and independently in each of these three instances. Indeed, Henry Fairfield Osborn, President of the American Museum of Natural History, New York City, declares that a very similar shape and form has been independently evolved "at least twenty-four times."—*"Encyc. Brit.," Vol. XX, p. 578.*

Soon after the evolution controversy arose, St. George Mivart, a very accomplished scientist of London, wrote a book entitled "The Genesis of Species," in which one chapter was devoted to examples of such closely similar structures or organs which, nevertheless, must have had diverse or independent origins. More recently, Dr. Arthur Willey, Professor of Zoology

International

A model of the prehistoric Plesiosaur.

in McGill University, Montreal, has issued a book entitled, "Convergence in Evolution" (1911), "convergence" in this sense meaning essentially the same as the "parallel evolution" spoken of above. The latter author declares that, "every system of organs throughout the animal kingdom will be found to yield abundant instances of convergence." (*P. 107.*) And he goes on to say that "the breaking down of the former landmarks of ho-

Tasmanian Wolf (Thylacine).

mology [comparison of parts or organs], offers a tremendous opportunity for emancipation from the trammels of speculation," because, in the light of our advancing knowledge of comparative anatomy among the various animals, "hardly one universal criterion of homology can be mentioned which would pass muster in a critical examination."—*P. 170.*

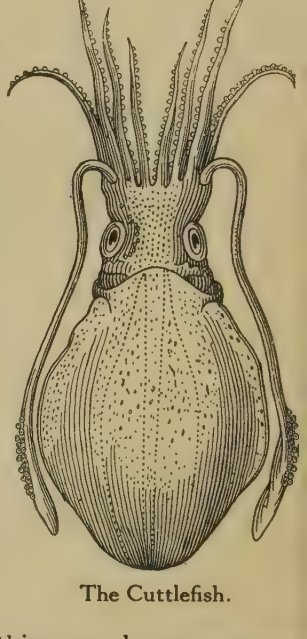
Hard to Swallow

From this large group of facts we become convinced that these many similar or identical structures, which must have been evolved quite independently (if evolved at all), make too great a draft on our credulity. At least, these hundreds of examples of "parallel evolution" greatly weaken our confidence in *homology*, or similarity of parts and organs, as a *proof* of blood relationship.

Let us note a few more specific examples.

There is an animal on the other side of the world that is called the *thylacine*, or the Tasmanian wolf, being confined to the island of Tasmania. It looks so absolutely like a dog or a

wolf at a distance that one could hardly tell the two apart. Yet the thylacine is not a true mammal at all, but a *marsupial*, or pouched animal, carrying its immature young ones around in a sort of pocket, as the opossum does. Thus it is quite impossible to suppose that this animal has been derived from the dog or wolf, or the latter from it. The two types must have been produced quite independently. How did nature come to evolve this absurd parody on the wolf by any system of natural selection or any other form of evolution?



The Cuttlefish.

Let us take the eye. There are several distinct types of eyes, each type being quite efficient as organs of seeing. But if we take the eye of the higher animals, we become amazed to find an almost identical structure in the cuttlefish or devilfish, which is really a mollusk. Its eye has all the parts found in the human eye, a retina, a sclerotic, a choroid, a vitreous humor, an aqueous humor, and an adjustable lens, just as in the eye of one of the higher vertebrates. Now I can believe that these similar organs could have been created independently for these very distinct classes of animals. But I cannot believe that this marvelous organ was evolved independently in these two instances by any process of natural development or evolution. If Darwin used to say that the origin of the eye always gave him a cold shiver, whenever he thought of explaining it by evolution, I do not think that his mental equilibrium would have been restored if he had considered that this organ must have been evolved quite separately in at least these two instances. Indeed, this process must have been repeated also once more; for the *pecten*, another kind of shellfish wholly different from the cuttlefish, has two rows of almost equally perfect eyes around the edge of its body. I cannot force myself to believe that these complete organs of

sight were separately and independently evolved by any natural development in these three instances.

Strange Comparisons

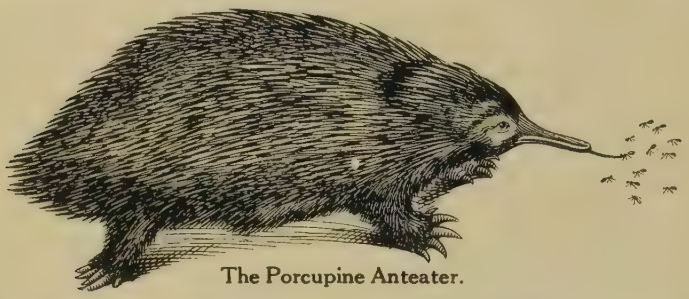
Or let us take the method of reproduction by which the young are developed for a period of time within the body of the mother by means of the structure called a *placenta*, the young partly-developed animal being afterwards brought forth alive or born. All the structures and the greatly complicated processes connected with this method of reproduction are very different from the method of laying eggs that prevails among most of the lower animals. But what is our amazement at finding that not only the larger land animals thus bring forth their young alive, but certain sharks do so also, and even the sea squirts or, ascidians, do the same. How can we believe that this placental method of reproduction was separately evolved in these three instances? Yet it would be absurd to say that any two of these kinds of animals had derived these structures and these habits from a common set of ancestors.

There are four kinds of animals called anteaters, two in Australia, one in South Africa, and one in South America. Of those in Australia, one is a *monotreme* and lays eggs, the other is a *marsupial* or pouched animal. The other two are *mammals;* but differ from each other considerably. However, all *four* of these types have the same long snout, the same long, sticky tongue, and the same enormous development of the salivary glands; and they all feed habitually on insects, though under suitable opportunities they will use their long tongues also for extracting the honey from flowers. But these animals cannot be related to one another at all; each must have developed his peculiar organs of eating quite apart and independent of the other three.

Darwin Himself Stumped

Just how many times organs of flight have been evolved quite independently, according to evolutionists, I do not know. The *pterodactyl* was an ancient flying reptile, with large membranous wings like a bat. In addition to these two, we have also many kinds of insects, besides the birds, that have very efficient organs of flight. In addition, we have several kinds of flying mammals, several distinct kinds of flying fishes, and one or two

flying reptiles. What a crime against our reason it is to try to persuade ourselves that these animals all developed these organs



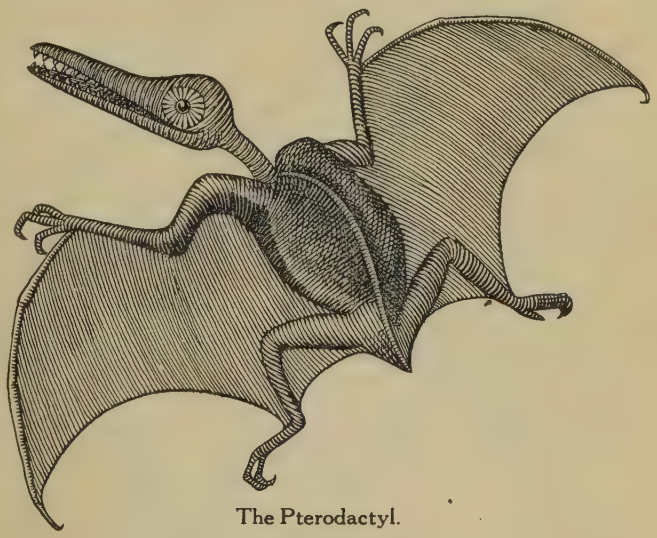
The Porcupine Anteater.

of flight by some natural process of development and quite independently.

Then there are the electric organs of fishes. Darwin said that "it is impossible to conceive by what steps these wondrous organs have been produced." Many kinds of fishes have these electric batteries. But in some of them the electric organs are

The Bear Anteater.

situated in the head, in others they are in the tail. Evidently these could not have had a common origin. The *torpedo*, a kind of skate, is one of the best known; but there is also the electric eel of South America, and the big electric catfish of the rivers of central Africa, which is called the *thunder-fish* by the Arabs. The difficulty of accounting for these electric organs is greatly increased when we find that in each of these three instances, at



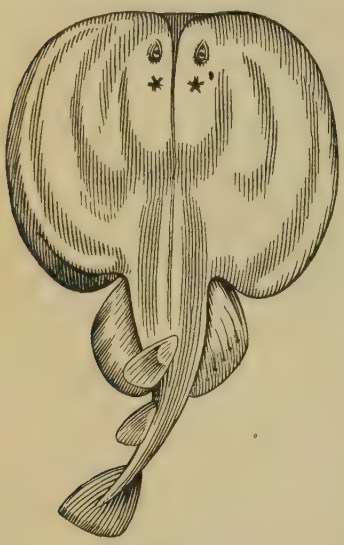
The Pterodactyl.

least, there are closely related species which, according to D. S. Jordan, show no trace of the electric apparatus.

The organs for the production of milk with which to feed the young are usually associated with the method of bringing forth the young alive. But pigeons, during the breeding season, produce a substance in their crops which greatly resembles the milk of mammals, and which when mixed with the partly digested food in the crop, is fed by the old birds to the young ones. But certain fishes called *rays*, classified under three distinct genera, which bring forth their young alive, have a wonderful apparatus on the inside of the uterus which secretes a true milk, with a most remarkable contrivance by which this milk is guided into the throat of the immature embryo, with associated muscles in the wall of the uterus which squeeze the milk out.

Facts that Spoil Theories

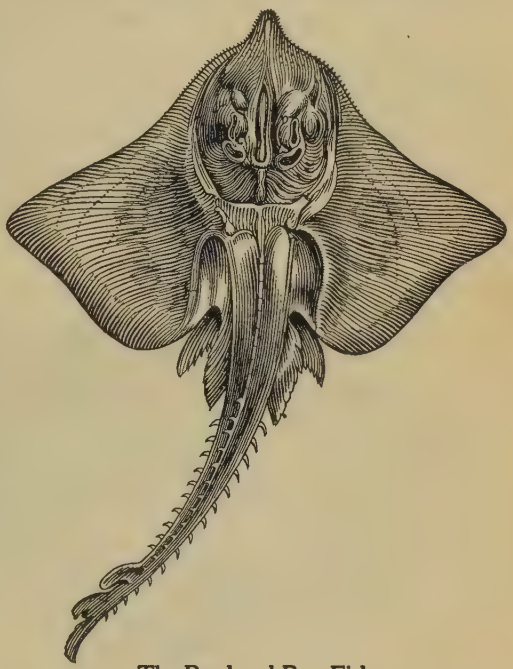
Let us next consider the familiar organ of birds known as the gizzard. It is really an extra stomach, fitted up like a mill for the express purpose of grinding up the food that has been swallowed without chewing. But besides the birds, we have the toothless anteaters, all of which have gizzards. Crocodiles and other kinds of reptiles also have them, and so did the ancient dinosaurs, the hugest beasts that ever walked the earth. In addition, we have also several kinds of fishes with gizzards, such as the "gizzard shad" and the "gizzard trout," and also two or more kinds of mullets. No wonder Willey says that when he first found this identical structure in two such widely separated families of fishes as the shads and the mullets, he began to distrust his own eyes. And he adds the very sensible statement that such facts appear to spoil all the usual theories of evolution based on comparative anatomy.—"*Convergence in Evolution*," *p. 110.*



Electric Ray.

But habits and instincts among the animals must also be accounted for, if evolution be true. In the case of such animals as the social insects, that is, the bees, the wasps, the ants, and the termites (often called white ants), we have almost identical methods of breeding and habits of life which must (according to the evolution theory) have been separately evolved at least in these four instances; for no one can suppose that either of these groups is related to the others. I do not have the space in this chapter to go over the many remarkable structures and the astonishing habits of these social insects. Suffice it to say that each of these four groups has *castes* or distinct classes among the members of the colony. The termites and the ants are some of them much more complex in their organization than the honey bees; but it will suffice to take the latter as typical of the rest.

The peculiarity of this caste system is that the workers are different in structure and in habits and instincts from *either the father or the mother*, both of which do not engage in honey-gathering at all, and indeed could not gather honey and pollen if they tried. Among all these social insects there are castes or classes, which differ from one another and from their parents in a most astonishing degree. In this connection one is led to ask, How did these insects develop this habit of breeding certain classes of "workers" with structures and instincts so utterly different from their parents, structures and instincts in fact *which none of their ancestors ever possessed?* But still another question intrudes itself right at this point, How did *four* distinct tribes of insects *independently* develop this habit of producing classes that are completely different from any of their ancestors?



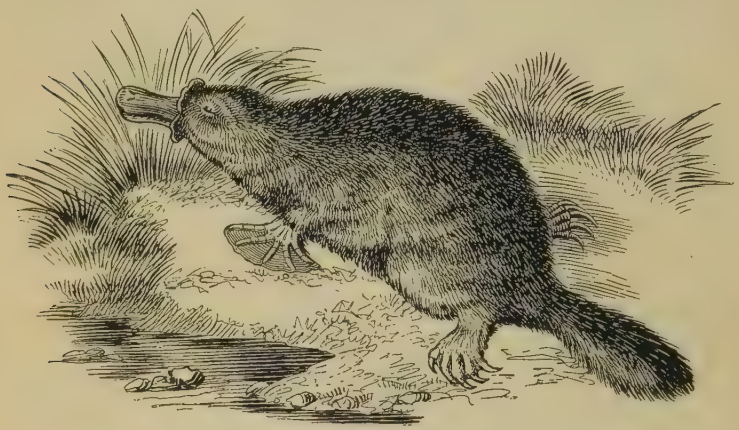
The Bordered Ray Fish.

Honey Bee, Wasp, and Termite.

Degeneration More Sure than Evolution

There is no difficulty in accounting for these things on the hypothesis of a real creation. But I can only smile at the easy credulity of the man who says he believes these remarkable peculiarities could have been *separately evolved* in each of these four great groups of the social insects. The stories of "Alice in Wonderland" or of the "Wizard of Oz" do not make any greater demands on our imaginative powers.

As we gather up the general facts enumerated in this chapter, we are able to reach some very definite conclusions. The first of these conclusions is that *morphology*, or the comparison of

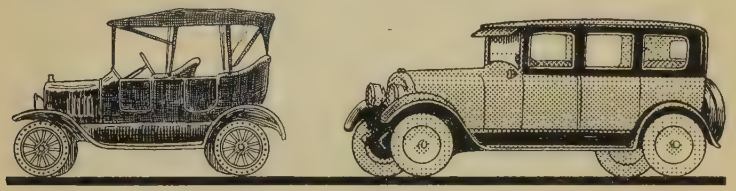


The Duckbill.

structures found in distinctly different kinds of animals, is a delusion and a snare when we attempt by these comparisons to trace outlines of evolutionary descent. If such comparisons could get us anywhere, we would have to believe that the duckbill of Australia still retained its flat snout and its egg-laying habit as a relic, an heirloom, from its imaginary bird ancestors. But this latter idea would only create a smile on the part of any well-informed student of zoology. And we ought similarly to reject the suggestion that such a structure as the human vermiform appendix is in any way a relic of the herbivorous animals which evolution would declare were in the line of man's ancestry.

Morphology, or studies in comparative anatomy, has no evi-

dential value for well-informed scientists to-day, and can be of service in proving evolution only for those who do not know the results of modern scientific study. Accordingly, when the skeleton of the gorilla is stood up alongside that of a man, and it is pointed out that every bone in the one is to be found in the other, it is only as if we were to place a Ford alongside of a Cadillac,



Did a Ford evolve itself into a Cadillac?

and point out how many parts of the one are duplicated in the other. It is only by a trick of logic that such a comparison would lead us to say that the Cadillac has evolved from a Ford. The man who would seriously apply such a method of comparison to proving that man has evolved from lower animals, does not show much evidence of clear thinking.

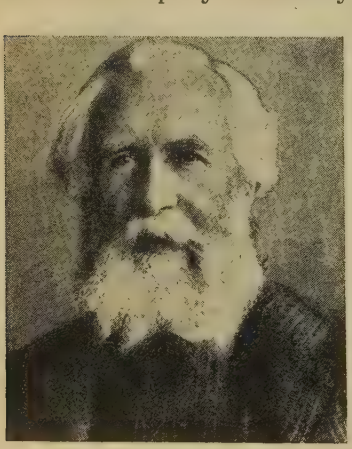
On the other hand, if there is any blood relationship between man and the great apes, it is far more reasonable to suppose that the apes are degenerated or hybridized men, than that man has evolved by progressive development from the apes. Degeneration is a thousand times better established as a general principle of nature than is progressive development.

Chapter Eight

Lessons from the Embryo

THE fact that all the larger animals start from ova, or eggs, was first published to the world in 1651 by William Harvey, the discoverer of the circulation of the blood. But further knowledge of the stages in the development of the embryo was long delayed, until K. E. von Baer (1792-1876), about a hundred years ago, worked out the first comparisons between the developing embryos of man and the various classes of animals. That they all start alike and for many stages of their growth continue to behave in the very same fashion, appeared so remarkable that during the second quarter of the nineteenth century this fact gave rise to a great deal of speculation as to the reasons for this similarity.

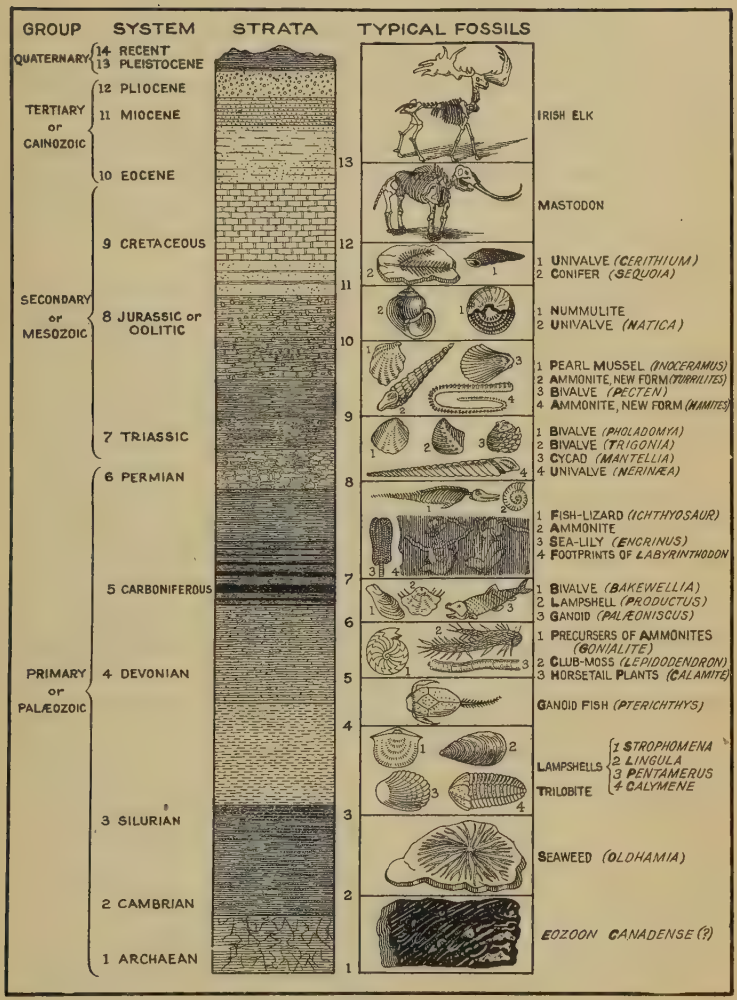
Like Louis Agassiz (1807-1873) his contemporary, von Baer to the end of his long life rejected the theory of organic evolution. But long before he died the rather meager facts of embryology, as then known, had given rise to what is usually called the "recapitulation theory," which in the hands of Ernst Haeckel and others rapidly became by all odds the most popular argument in favor of the evolution theory. If within recent years this line of argument has much declined in favor among leading scientists, it has been because more recent discoveries in biology and embryology have tended to spoil the argument as contributing any support to the general doctrine made so familiar by Charles Darwin.



Ernst Haeckel
(1834-1919)

Embryo Development

A detailed description of the developing ovum is not essential for our present purpose. It may suffice to say that the one cell



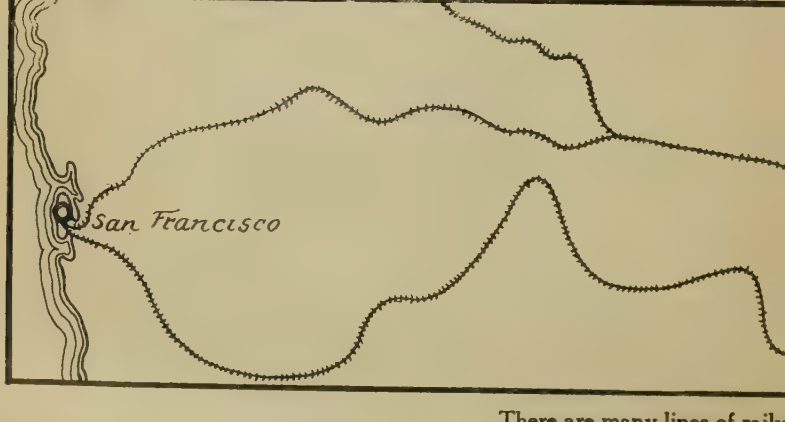
The Evolutionary Classification of the Fossils.

The geological classifications are always read from the bottom upward, in accordance with the supposition that they represent a real historical sequence, and that the oldest geological formations (with their typical fossils) are always found at the bottom in any given locality, or stratigraphically lower than the others. Both of these suppositions are now known to be untrue.

first goes through a complicated process of division and becomes two; each of these divides and thus there are four; then eight; then sixteen. Soon the developing embryo comes to look much like a mulberry, a round ball composed of a great many individual cells. Next the ball becomes like a hollow sphere, the cells composing merely the shell of this sphere. This is termed the *blastula* stage of the embryo; and it is a very interesting fact that all the higher forms of life develop thus far in the very same way, each passing through this blastula stage.

By the next processes of growth one side of this hollow sphere bends inward, forming a slight groove or depression, this depression becoming deeper until the two sides around it unite, thus forming a sort of double-walled sphere, which is now called the *gastrula*. With further development the gastrula lengthens out a little and becomes a short double-walled tube, with much more complicated processes a little later. We need not describe these next stages; but it must be noted that all of the higher animals, including reptiles, birds, mammals, and man, always pass through this same gastrula stage; and only afterwards do they gradually become more and more different from one another.

Why are all these animals alike in their early stages? Many people have said that this resemblance is because the higher forms have all been evolved from the lower kinds of animals, and that in its development the horse, the dog, or the man must



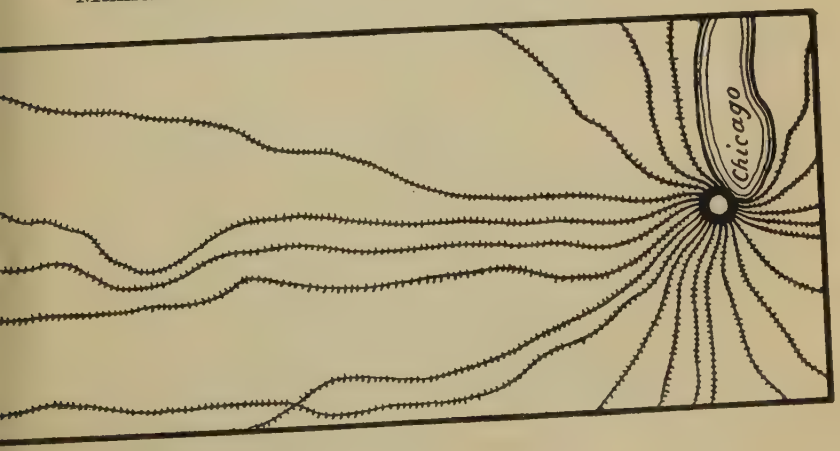
There are many lines of railw

always pass through, of course very rapidly, the stages through which its ancestors passed in the long ages of the past when it was evolving to its present position. This is the famous "recapitulation theory," which said that each of the higher animals repeats or recapitulates some or most of the stages that its long line of developing ancestors went through. And the evolutionists long pointed to these striking facts of embryonic development as one of their strongest proofs of the theory of organic evolution.

A Better Explanation

But is there not a better and a more rational explanation than this whimsical one of recapitulation? All the higher animals start alike from a single fertilized cell, the ovum. How could any of them reach the higher stages of structure without all passing through many of their earlier stages side by side, or running parallel to one another?

For comparison, take the many lines of railway running westward from Chicago. For considerable distances these roads run parallel to one another; but gradually some of them turn toward the south, some of them toward the north, while others keep on westward. Of these last, those going clear through to the Pacific Coast will keep together, or parallel to each other, for much longer distances than will those going to Texas or to Minnesota.



running west from Chicago.

Similarly, we might expect that the embryos of the higher animals, such as the dog, or the horse, or the elephant, will resemble the human embryo for a much longer period than will the embryos of the starfish, the frog, or the chick. The insect and the vertebrate would naturally begin to diverge from each other somewhat early in their development; though two insects, such as a house fly and a grasshopper, or two mammals, such as a dog and a horse, will maintain their resemblance to each other for a much longer period.

These facts follow from necessary first principles; they are of the very nature of things, and could not well be otherwise. As all the higher forms start alike from a single cell, a hundredth of an inch or so in diameter, all these cells or ova of the cat, the dog, the horse, the ape, or of man being at first so nearly identical that no powers of the microscope seem to show much difference between them, save in the number of the chromosomes they contain in the nucleus, or slight differences in the size of the ova themselves,— since they all thus start alike, how could they develop into the higher forms without running more or less parallel to each other for some time, gradually diverging more and more from the common or average type?

This is all there really is to this wonderful "recapitulation" process, which in the latter decades of the nineteenth century was so very much overworked by Haeckel and his disciples as an argument for organic evolution.

The Fallacy in "Recapitulation"

Of course, these evolutionists had much more to their argument than the facts we have just given. They had three sets or series to compare. These three series were as follows:

1. The individual development of a single animal from the ovum to maturity.

2. The classification series, composed of all the typical animals arranged in a series, from the one-celled type up to one of the higher animals, or man.

3. The geological series, which also starts with rather small, lowly organized forms, and runs up to the higher or more highly organized types, man last of all.

The *first* of these series is an actual fact; it represents a real historical development. The *second* of these series is purely arti-

ficial; but it is a very natural one, and is a convenient one for purposes of scientific study. But up until quite recent years the geologists stoutly maintained that the *third* also represents just as true a natural order, just as much a real historical fact, as the first one, only a much longer one. Within the past few years, however, it has been proved that *the third is just as truly an artificial series as is the second.* Indeed, it is much like the second; for it simply represents the floras and faunas of the ancient world, found as fossils in the rocks from all over the globe. And the work of geologists in putting these fossils together into a series is just as much *an artificial act* as is the similar work of the zoologist or the botanist in arranging the corresponding living forms into a series from the little to the big, from the simple to the complex in structure.

Man-made "Orders"

We are now able to get our bearings with reference to this argument from "recapitulation." We see that the evolutionists are really comparing one natural or real series of facts (No. 1), with two wholly artificial series (Nos. 2 and 3), which as serial orders have each only a purely artificial or constructive existence. The individual units of the classification series and of the geological series really exist, of course; but the arrangement of them in a serial order or line, one after another, is an arbitrary act of the one making the arrangement. And hence, while these comparisons are interesting and convenient for purposes of comparative study, the results of such comparative arrangements of the facts of the modern animals and of the ancient animals, with the *one real historical* order: namely, that of the embryonic development of the individual, cannot *prove* anything in favor of the theory of organic evolution. In fact, this "recapitulation theory" never did prove anything at all except the ease with which people can fool themselves and others by mere tricks of logic.

Now I know that some friends of the evolution theory will protest that this matter of the "recapitulation" argument is not by any means as simple — and as silly — as I have here represented it. They will begin to talk about the "gill slits" in the human embryo, the "tail" it is alleged to show, and a number of other alleged "vestigial" parts or structures, some of which "persist" throughout life.

The space here at my command will not permit me to do more than briefly to refer to a few general principles in this connection, referring the interested reader to my recently issued "The Phantom of Organic Evolution" (1924) for a more complete treatment of these topics.

What about the "Gill Slits"?

The so-called bronchial arches, or "gill slits," which are depressions or grooves below the head of the embryo, never actually open into the larynx, as do the real gill slits of fishes; nor do they ever have anything to do with the breathing organs, as

T. H. Morgan
The human embryo (showing gill slits).

do the true gill slits of the sharks and other fishes. The upper one of these arches finally develops into the upper jaw, the second into the lower jaw, and the others develop into the various organs around the neck. They are necessary as preparatory stages for the structures to follow from them. Their fancied resemblance to the gill arches or gill slits of fishes has been much overstated by evolutionists; and this idea that they are the useless relics of a fish-stage through which man once passed in his upward evolution has been much promoted by inaccurate or even fraudulent diagrams (mostly "made in Germany") which have been copied from one book to another, often without the writers of the books knowing the real facts in the case.

Similar remarks could be made regarding the so-called "tail" of the human embryo. Its use by some half-informed advocates of the evolution theory as an argument, is not an evidence of

much thinking or much embryological information on their part.

Several of the ductless glands of the human body, such as the thyroid, the pineal, and the pituitary, were once pointed to by the evolutionists as useless relics or vestiges of man's inheritance from his animal ancestors. Modern discoveries in physiology have put a stop to this argument. But until these discoveries of the real uses of these organs, this argument of the evolutionists was among the most effective they had along this line.

Big Strawberries on Top

If we return to a consideration of the present status of the "recapitulation theory," we shall find that it has but few defenders among biologists of the first rank. Adam Sedgwick admits that there is a general resemblance between the embryo and the larval stage of certain animals; but he adds that "this resemblance, which is by no means exact, is largely superficial and does not extend to anatomical details."

Dr. Percy Davidson, of Leland Stanford Junior University, has written a treatise entitled: "The Recapitulation Theory and Human Infancy" (1914). It is a mine of information regarding this whole subject. But in his summary of the present situation Davidson says:

"From these authoritative statements it appears that the facts of embryonic resemblance fail to support recapitulation in all three of its main implications.

"The order of appearance of characters is not uniformly, or even commonly, that required by recapitulation, which is first those representative of the order, and then in succession, of the family, genus, and species. . . .

"In the second place, embryonic resemblance in comparable stages does not vary directly with remoteness of kinship, but shows often very great divergence from this rule. . . .

"Finally, where resemblance does exist, it is not identity, nor even close [resemblance]."—*Pages 34, 35.*

L. C. Miall, in an address before the British Association in 1897, said:

"The best facts of the recapitulationist are striking and valuable, but they are much rarer than the thoroughgoing recapitulationist admits; he has picked out all the big strawberries and put them at the top of the basket."—"*Proceedings*" (*1897*), *p. 682.*

William His, one of the most eminent of embryologists, says:

"In the entire series of forms which a developing organism runs through,

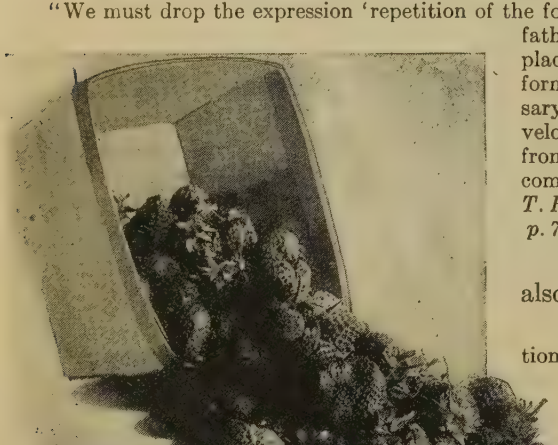
each form is the necessary antecedent step of the following. If the embryo is to reach the complicated end-forms, it must pass, step by step, through the simpler ones. Each step of the series is the physiological consequence of the preceding stage and the necessary condition of the following."—*Quoted by T H. Morgan, "Evolution and Adaptation," p. 71.*

A Mere Bypath

And Professor His declares that Haeckel's method of comparison is a "mere bypath," and is "not necessary at all for the explanation of the facts of embryology."

Oskar Hertwig, another eminent authority, says:

"We must drop the expression 'repetition of the form of extinct forefathers,' and put in its place the repetition of forms which are necessary for organic development and lead from the simple to the complex."—*Quoted by T. H. Morgan, op. cit., p. 79.*



The big strawberries on top.

Vernon Kellogg also declares:

"The recapitulation theory is mostly wrong; and what is right in it is mostly so covered up by the wrong part that few biologists longer have any confidence in discovering the right."

Finally, we must conclude these declarations with another one which represents the present phase of this question:

"The critical comments of such embryologists as O. Hertwig, Keibel, and Vialleton, indeed, have practically torn to shreds the aforesaid fundamental biogenetic law [of Ernst Haeckel]. Its almost unanimous abandonment has left considerably at a loss those investigators who sought in the structure of organisms the key to their remote origin or to their relationships."—*Scientific American, February, 1921, p. 121.*

So much then for the notorious "recapitulation theory," which the uncritical zeal of Haeckel labeled the "fundamental

biogenetic law." This theory originated when the facts of embryology were new and but imperfectly understood; it was brought into prominence by means of an artificial arrangement of the fossils which seemed to resemble the embryonic development from the simple to the complex. It has now collapsed with a more accurate and more complete knowledge of the developing embryo, and especially with the exposure of the artificiality of the geological arrangement of the fossils.

In short, as I have said elsewhere:

"The recapitulation theory, as an argument for organic evolution, was founded on ignorance and deceptive comparisons; it has now outlived its popularity among those evolutionists who feel obliged to depend henceforth upon honest arguments to promote their theory. To continue to use the recapitulation theory as it was used by Haeckel and Darwin, can no longer be regarded as an indication of intellectual honesty."—*"The Phantom of Organic Evolution" (1924), Chap. VII, last par.*

Wide World Photos

"Hear no evil; see no evil; speak no evil."

Chapter Nine

Darwinism

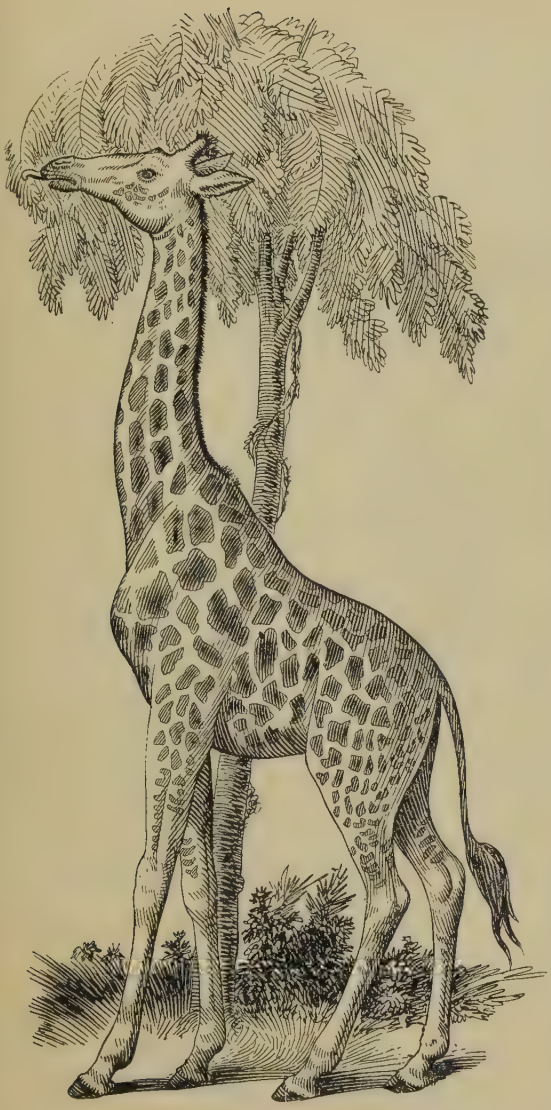
EVERY intelligent person knows, or ought to know, that Darwinism and the theory of evolution are not by any means the same; they are not synonyms. The latter expression is much larger, more inclusive than the former. Organic evolution means that animals and plants, the human race included, have come about through a long process of natural development, not necessarily in any particular manner, but somehow, we cannot know how. Darwinism undertakes to tell *how*. Charles Darwin's grandfather was a strong evolutionist. Accordingly, when Charles Darwin came to write his now famous book, he did not attempt to prove organic evolution; not at all. He took that for granted; and merely undertook to show *how* this wonderful process of organic development has probably come about. Because of all this, we find scientists using the term Darwinism only in the narrower sense, as applying to Darwin's theory of "selection," which was his particular explanation of how organic evolution came about.

What is meant by natural selection, or the survival of the fittest?

Darwin recognized that, if his theory was to explain the origin of plants and animals, it must explain all their wonderful structures and the wonderful adaptation of these structures to the needs of the organisms, and must include everything about man, along with the other living things.

Survival of the Fittest

According to Darwinism, the giraffe was not made originally with a long neck adapted to browsing off the limbs of trees. No; he has a long neck and can browse off the limbs of trees because some of his ancestors happened (by a lucky variation) to develop long necks and long front legs, and so were able to survive by reaching food which was quite out of the reach of the other animals. Hence these other animals in competition with the giraffe all died off in the fierce struggle for existence (which Darwin always pictured the state of nature to be), while the giraffe was the lucky survivor.



"According to Darwinism, the giraffe was not made originally with a long neck."

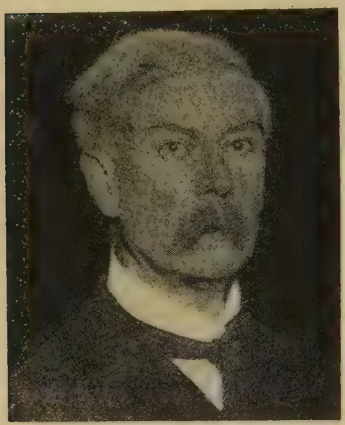
According to Darwinism, the honey bee was not created with peculiar organs and an instinct for gathering honey. Not at all; but one of the bee's ancestors that happened to have a long proboscis and that happened to learn how to use this organ in gathering honey from flowers, was lucky enough to survive; while the other insects that were not so well adapted to the necessities of the situation all died off.

According to Darwinism, man was not originally created as an intelligent being,

"To have dominion over sea and land;
To trace the stars and search the heavens for power;
To feel the passion for eternity."

Not by any means. But some of man's apelike ancestors happened to have more wit than their companions, and were able to live by their wits instead of by their muscles alone. So they survived and left descendants, while the others were beaten down in the awful struggle for existence, and all died off.

Thus Darwinism pictures man as coming to be what he now is merely because he was better able to survive, even, when necessary, at the expense of the lives of others who were his companions.



Alfieri Picture Service
J. Arthur Thomson.

Evidently not much room for altruism and unselfishness in such a system of things.

Dispensing with Divine Design

This method of explaining all the structures, all the organs, and all the natural instincts of plants and animals, including man, is of the very essence of Darwinism. The latter was essentially *a purely mechanical and non-purposive explanation of the adaptations in nature.* It was as directly as possible opposed to the "watchmaker" explanation of Paley and other students of design in nature. *Teleology* is the term used to mean the doctrine of design throughout nature; and as Thiselton-Dyer, the English botanist, once expressed it, Darwin swept away "the whole of Paley's teleology, simply dispensing with the supernatural explanation."—*Linnæan Society (1908), p. 37.*

J. Arthur Thomson, in his usual pungent style, has expressed this characteristic of Darwin's theory as follows:

"Tone it down as you will, the fact remains that Darwinism regards animals as going upstairs, in a struggle for individual ends, often on the corpses of their fellows, often by a blood-and-iron competition, often by a strange mixture of blood and cunning, in which each looks out for himself and extinction besets the hindmost."

Huxley expresses the same idea in the following words:

"For his successful progress as far as the savage state, man has been

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"John Daniel," world's most intelligent monkey, compared with an intelligent dog.

largely indebted to those qualities which he shares with the ape and the tiger."

A Bloody Ladder

These cruel and heartless habits of man's apelike ancestors became in reality the bloody ladder by which man climbed into his present position of dominance at the head of the animal king-

dom. Evidently, nature has always put a high premium on selfishness and ruthlessness; for the ones that had these characteristics best developed always got the big prizes in the struggle for existence. They left descendants like themselves; the rest were killed off or died out.

As John Fiske has expressed it:

> "Those most successful primitive men from whom civilized peoples are descended must have excelled in treachery and cruelty, as in quickness of wit and strength of will."

These excerpts may suffice to show the ethical or moral bearings of Darwin's theory. This does not imply that an almighty, allwise Creator *could* not have developed plants, animals, and men by this sort of process through a heartless struggle for existence. I suppose He could. But it needs no argument to show that the creatures who were made by this heartless process could not very well be expected to develop any great love for such a maker — I will not say Creator. Evidently a good many explanations would be necessary on the part of the Darwinists before such a theory could be reconciled with the Christian doctrine of a God of love. Darwinists have many of them claimed to believe in a God. New Testament Christians, however, have always had difficulty in recognizing in the God of Darwinism those characteristics with which they have become familiar in such passages as John 3: 16 and 17: 23.

Darwinism a Libel on God

We are not here concerned with the larger aspects of the problem of evil and its origin. This problem will be considered in Chapter X. Even the moral bearings of Darwinism can be spoken of here only to the brief extent of pointing out that Christians have considered Darwin's explanation as a real libel on the God of the Bible. When Darwin's book first came out, Haeckel hailed it as an "Anti-Genesis"; a half century of discussion has not only confirmed this, but has shown it to be even more truly an "Anti-New Testament."

But we are here chiefly concerned with the scientific aspects of Darwin's theory. Darwin was always very ostentatiously candid in saying that, "if it could be demonstrated that any complex organ existed, which could not possibly have been formed

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A model of the giant Iguanodon, long extinct

by numerous, successive, slight modifications, my theory would absolutely break down."—*"Origin," 5th ed. (1869), p. 227.*

While he was yet alive two men, Spencer and Mivart, took him at his word, and brought forward many specific examples which could not thus be accounted for. Since their time the work has gone forward, though a large portion of the discussion has gone on behind almost closed doors, that is, in the technical journals and the technical books, which are almost wholly unknown to the people educated along other lines. However, the work of refuting Darwinism has been very completely accomplished; so much so that John Burroughs, just before he died, wrote that Darwin had been "shorn of his selection theories as completely as Samson was shorn of his locks."—*Atlantic Monthly, August, 1920, p. 237.*

The "Arrival of the Fittest"

Much of this discussion has been made to turn on an apparent duel between the doctrine of acquired characters (known as Lamarckism) and that of natural selection. Each of these ideas has a few scattering advocates; but most biologists have discarded both of them, at least so far as serving as an explanation of organic evolution is concerned. No one denies that in a somewhat mild way there is a competition for a good supply of food or other opportunities of existence. The Christian says that this is not the normal, but a *wholly abnormal*, condition among living things; but he adds that such a struggle could never explain any tendency toward advancement; for struggle for existence, hardship, and privation among animals and plants do not develop, *they degrade*, they tend to bring about degeneration of the type. The scientist adds that Darwinism "may explain the survival of the fittest, but it can never explain the arrival of the fittest." As for the inheritance of acquired characters, which Herbert Spencer pinned his faith to so tenaciously, it does not seem to happen. It seems to be a pseudo-scientific idea, like perpetual motion or spontaneous generation.

During the last quarter of a century, Mendelism has arisen, has grown strong, and seems almost to have put all other evolutionary theories off the map. We have already considered this phase of the subject in Chapters II and III. The present attitude of progressive scientists regarding natural selection may be

indicated by the recent address of J. Playfair McMurrich, at the Cincinnati Meeting of the American Association, December, 1923, when he said regarding natural selection:

"The biological world of to-day does not ascribe to that factor the importance that Darwin gave it. . . . It is difficult to believe that many of the minute differences that distinguish species have selective value."

Also at the corresponding Liverpool Meeting of the British Association, 1923, A. G. Tansley, in his Presidential Address before the Botanical Section, declared:

"In regard to a multitude of characters, there is not only no proof, but not the smallest reason to suppose that they have now, or ever did have, any survival value at all."

A Fallen Idol

Another leading biologist, J. T. Cunningham, in a recent communication, declares that he considers "the theory of natural selection to be obsolete." He goes on to say that he holds this positive opinion in spite of the fact "that many naturalists still believe in the theory in America and elsewhere." But he con-

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An Eskimo eating raw meat. The struggle for existence does not develop, it degrades.

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Midget cigarette smokers. The race is degenerating.

cludes with the remark: "I venture to say that few who have made a special and practical study of evolution, and are well acquainted with recent progress in that study, have much faith in natural selection."— *Nature, March 3, 1923.*

I may be permitted to conclude this chapter with some remarks taken from my "Phantom of Organic Evolution" (1924):

"We may safely conclude from all this that a great idol has tumbled down, an idol which, while it stood on its feet, was clamorously praised and worshiped by more atheists and more enemies of the Bible than ever bowed before the ancient Baal or Apollo. Even in its ruined state we see belated reverence still addressed to the place in biology where it once stood; and belated hymns are still being chanted for it by such people as the Marxian socialists, and the teachers in the grammar schools and the high schools of America. Even the psychologists are still using miniatures of it in the class room, while the 'progressive' theologians keep on voicing the eulogies in its praise which they learned from the hod-carriers of natural science, when the latter were first constructing its shrine a full generation ago.

"But for the scholars of the world, the ones who persist in thinking for themselves, and who form their conclusions only on facts and still more

facts, the niche is vacant where once stood that golden 'Anti-Genesis,' as Haeckel once called it. And while some are sorrowfully groping around for something to put in the vacant place, the majority are directing their eyes upward to that inscription in the heavens, 'In the beginning God created the heaven and the earth.'"

Chapter Ten

An Appeal

THE evolution doctrine has now existed long enough to produce certain conditions in the intellectual world that must be taken into account in any comprehensive study of the questions considered in the preceding pages. The evolution doctrine has become an "orthodoxy"; any disbelief of it, or any opposition to it, has become a "heresy." To those who are acquainted with the history of human thought during the past twenty centuries, these terms at once become ominous. But the really ominous character of the present situation becomes evident when we realize that this modern scientific "orthodoxy" is running strictly true to form, and is already showing most of the characteristics of the established "orthodoxies" of the past.

The time has long since passed when it was only some clergymen with some obvious theological objections who openly opposed the scheme of organic evolution in its entirety. I have among my personal acquaintances many highly trained scientists, men who stand at the head of departments in well-recognized colleges and universities, who have definitely outgrown the older views on these subjects that they once held, or that were taught them when they themselves were students. And these men have outgrown the evolution theory because they have learned of scientific facts, important facts, facts that one can see and measure and photograph, facts that, so far as they are concerned, make any further belief in organic evolution appear like mere superstition.

But are such men allowed to voice their objections to this theory? Are they permitted to express their newly found convictions in the various scientific societies to which they may belong? Or are they permitted to publish their present views in the columns of any of the "reputable" scientific journals?

True Science Muzzled

Not at all. These men are compelled to witness in silence all manner of abusive attacks and false statements against the views that they have been forced by facts to believe is the truth; they

must even keep quiet under open attacks against their personal characters and reputations. Our opponents can attack us to their hearts' content through the recognized scientific journals; but we are seldom if ever allowed two inches of space for a reply.

Yet the scientific bodies of America and Europe are constantly preaching about the necessity of "academic freedom of teaching," or *Lehrfreiheit*, to use the German word. Is there any wonder that for many of us this unfair discrimination and patent injustice has become quite intolerable, or that the boasted freedom of research and of scientific discussion seems like a hollow mockery?

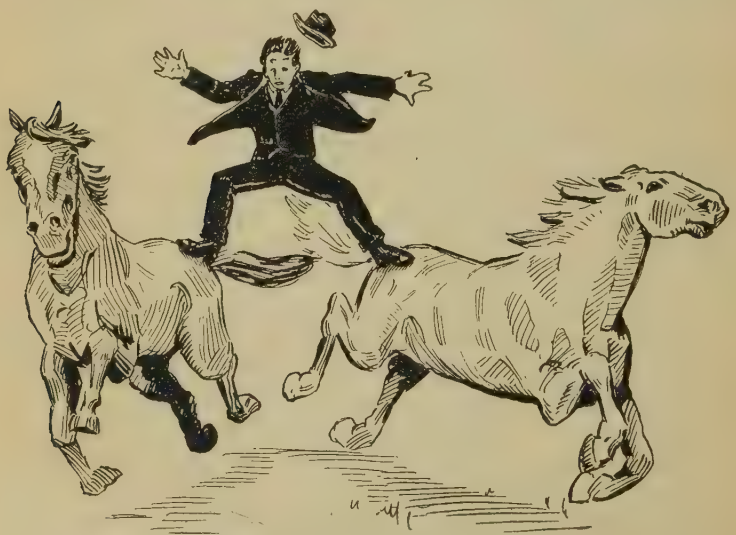
The doctrine of organic evolution has *not* been settled once for all, like the rotundity of the earth or the falsity of perpetual motion. The facts brought forward in the preceding pages (which have been stated in more detail in the other published works of the present writer) show that there is at least a large body of solid scientific facts on the other side. And it is not candid nor scientific, it is not fair to the persons who believe in the reliability of these facts, to rule these facts everlastingly out of court and deny them any right to be discussed in the "orthodox" scientific journals. Sooner or later these matters must be discussed. Facts like these cannot forever be ignored with lofty contempt. When these facts ultimately are brought out to the light of day, some reputations may suffer eclipse that now loom very large in the scientific world, when it becomes evident that these men have really become dogmatic and intolerant reactionaries, unwilling to discuss or to have discussed any facts that are clearly at variance with that creed which they had formulated as the shibboleth of scientific orthodoxy.

Self-Appointed Censors

These self-appointed censors of modern scientific discussion affect to complain because the present writer (as they say) is not a well-recognized specialist in some narrow field of original research; though probably, if I were such a specialist, they would bluntly advise me to stick to my little department and not indulge in generalizations about the entire field of biological science.

But may I be permitted to remind those who thus complain about me (and who thus seek to make a personal matter out of what ought to be a purely objective discussion of the *facts* in-

volved), that the founders of the evolution doctrine were not specialists, as we now understand the term. Darwin, and Wallace, and Spencer were certainly not specialists; they ranged over the entire field of natural science. Not one of them was a teacher of bright-eyed, keen-witted college students who are extremely reluctant to take generalizations like that of evolution on mere authority, and who have the inconvenient habit of criticizing the logic of a train of reasoning that does not seem to them to be sound. If Huxley may be called a college specialist in a certain sense of the word, his specialty certainly was not of a character that entitled him to be regarded as an expert throughout the entire world of plant and animal life, which is the ground covered by the theory of organic evolution. But Darwin and Wallace and Spencer had no hesitation in ranging at will over the entire field of natural science, as known in their day; though the first was merely a well-travelled country gentleman with a hobby, the second, a half-educated specimen collector, and the third a clever armchair philosopher with a bad case of *cacoethes scribendi*. None of these was aware of breaking any scientific, ethical code by his attempts to frame general



Evolutionary theories and scientific facts do not team together.

philosophic conclusions from a survey of all the facts within his knowledge, even though we now see that in every single department of science his knowledge was pitifully meager and inadequate, as compared with the facts that we now possess.

Had They Only Known

Consider for a moment the subjects of heredity and variation, about which these founders of evolution wrote so voluminously. How completely ignorant were they of all the real laws of heredity and the behavior of variations, as revealed by the modern science of genetics, following the path marked out for the scientific world by Gregor Mendel. In the department of astronomy and astronomical physics, the nebular hypothesis of Kant and La Place was still considered a reasonable and fairly accurate account of the probable origin of the solar system. Utterly ignorant of the revolutionary facts which have since been revealed to us under the title of radioactivity, these pioneers of materialistic evolution could calmly assume the past eternity of matter, in confidence that no scientific facts would ever be discovered to refute such an idea. Yet we now know that they were mistaken, and that matter (as we know it) cannot have existed from eternity; it must have had a beginning, just as truly and just as inevitably as organic life must have had a beginning. It should also be expressly noted that Darwin had made the theory of organic evolution "a going concern," as J. Arthur Thomson expresses it, long years before spontaneous generation was definitely refuted; so that in a certain sense it may be said that all the founders of evolution were ignorant of the profound truth that life can come only from antecedent life of a similar kind. In other words, evolution was to a certain extent founded on a belief in spontaneous generation.

During this same period, covering the two or three decades immediately following the publication of the "Origin of Species" (1859), the Lamarckian theory of the inheritance of acquired characters was almost universally taken for granted; Darwin taught this theory down to his dying day, and the longer he lived the more did he seem to rely upon this theory of Lamarck to help out his own private patent of natural selection. Finally, during this pioneer period, natural selection was actually supposed to be capable of originating and developing organs and

instincts, and even distinctly new types of life, instead of being, as we now know, merely a negative force that kills off those animals and plants which do not happen to be adapted to their environments.

An Age of Evolutionary Apologists

Since Darwin and Huxley and Spencer went to their graves, a constant succession of revolutionary discoveries in various departments of science has kept busy a new generation of apologists, who have tried to tell us how the old masters would have reconciled their theories with these new discoveries. We are now in the midst of the period of the evolutionary apologists; it is being everywhere proclaimed that the old views still remain unshaken in spite of all these discoveries. The disappointment felt because of Mendelism's failure to confirm the theory of gradual progressive change, has been a very bitter one; but the evolutionists have put on a bold face and have kept on assuring one another that these new discoveries in genetics have not disturbed the long established theory of organic evolution *somehow;* it has only changed our views of *how* this organic development has come about.

"Passing the Buck"

There are certain modern conditions that help to account for the present anomalous situation. Chief among these conditions is the undue specialization now prevailing in almost all departments of natural science. The specialist in ecology or in cryptogamic botany, for instance, may realize that, while variation and descent with modification may well account for the derivation of most species under a genus, or indeed for most of the genera under a family, the theory will nevertheless give us no glimmer of a hint of any method by which the great families themselves can be accounted for. Yet he thinks that the zoologists have made out a far better case, and that they can without doubt trace the ancestry of such animals as the horse, the elephant, or the rhinoceros by means of their fossil representatives. The zoologist, in turn, relies upon the accuracy of the alleged historical order in which these fossils lived one after another, which he thinks the paleontologist has scientifically established. And the paleontologist, though quite well aware of

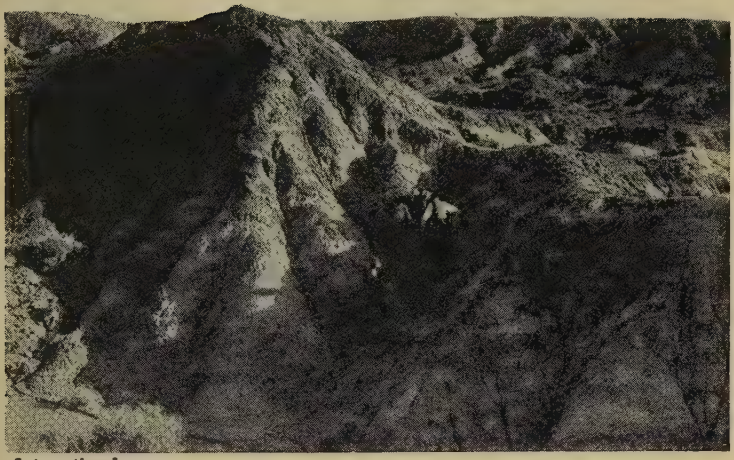
The complete skull of the giant Baluchitherium

the purely artificial way in which the alleged "horses" of the Tertiary beds have been assembled from various scattered localities and arranged in such collections as those of the Natural History Museum, New York City, in a supposed historical order, thinks that the rules of strict logic must not be too strongly insisted upon in a case of this kind, and that anyway these animals just *must* have lived in about this order of sequence. He takes refuge in the idea that the early pioneers of the science of geology really and actually proved the relative historical order in which the various types of life occurred in the long ago: and he thinks there cannot be anything very unscientific after all in modern paleontologists filling in the mere details, even though this act of filling in the details is a more or less arbitrary and artificial arrangement of the fossils concerned.

But as for the general theory of evolution, the paleontologist is quite confident that the geneticist has proved abundant instances of transformism, or the natural origin of species; and thus he passes the problem along to the latter. But the student of genetics is quite disillusioned, so far as his own specialty is concerned; he is quite aware of the difficulties in the way of reading organic evolution (in the broader sense) from the facts of heredity and breeding, as known in his department; but he passes the problem around again to the geologist and the paleontologist. As a concrete example of the latter, we have Thomas Hunt Morgan declaring: "The direct evidence furnished by fossil remains is by all odds the strongest evidence that we have in favor of organic evolution."—"*A Critique of the Theory of Evolution*," *p. 24.*

Is Evolution a Closed Question?

And so this game of "passing the buck" goes merrily on, each specialist realizing full well that in his own particular department the theory has become quite problematical, to say the least. But each supposes that his neighbor specialists have worked out abundant evidences of the general theory in their departments. And this feeling of confidence in the general results of all modern research is from time to time confirmed by the pontifical declaration of some such man as Henry Fairfield Osborn, who poses as a general broadcaster for all the other men engaged in the study of this problem. For these broadcasters



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Men hunting fossils in the Mojave Desert, California.

keep assuring their fellow workers that the theory of organic development is absolutely victorious along the whole line at the present day.

It thus happens that, while a knowledge of minute particulars in all departments of natural science has been increasing rapidly and enormously during recent years, yet the increasing tendency toward strict specialization has helped to maintain the *status quo* with regard to the broad generalization known as the theory of evolution. As we know, this theory arose long before the day of the strict specialist in any department of botany or zoology; to-day the very profusion of the accumulations made by the crowds of modern specialists tends to make it almost impossible for any one person adequately to survey the entire field of plant and animal life, as was done two generations ago by Darwin, Huxley, and Spencer. Thus the wide generalizations formulated by these pioneers are still regarded as the only valid ones for this particular phase of biology. For it now seems to be forbidden by the unwritten ethics of modern science for any one to attempt to revise this theory in the light of modern discoveries; the general truth of organic development *somehow* is regarded as a closed question, though criticism of the *how* of the

process is still permissible. Thus by the very inertia of hosts of venerable names, a generalization made long ago in utter ignorance of multitudes of facts as we now know them, has become an established "orthodoxy"; a vogue of strict specialization now forbids any one taking a broad survey of the entire problem, except as he merely recounts the conclusions of his fellow specialists; and so the theory of evolution still maintains its ground, defying all efforts to discredit it, or even any effort to evaluate again its claims in the light of our entire modern scientific knowledge.

"Let there be Light"

What the present situation cries out for is a full and free discussion of all the basic ideas of the theory, and particularly the geological facts. "Let there be light" ought to be the demand of every one who is in any way interested in seeing our modern world get at the real facts regarding the origin of things. The time for free and open discussion has come. Assuredly the cause of Christianity, with its belief in a literal creation and its denial of the theory of organic development, has nothing to fear from such an open and full discussion. On the contrary, it courts such discussion, being assured that many beliefs which now claim to be scientific will be found to be mere superstitions.

Stronger than money, stronger than armies, stronger than all the forces of men and demons against it, is a divine idea whose time has come. This idea is here. The time has arrived.

"Then to side with truth is noble,
When we share her wretched crust,
Ere her cause bring fame and profit,
And 'tis prosperous to be just."

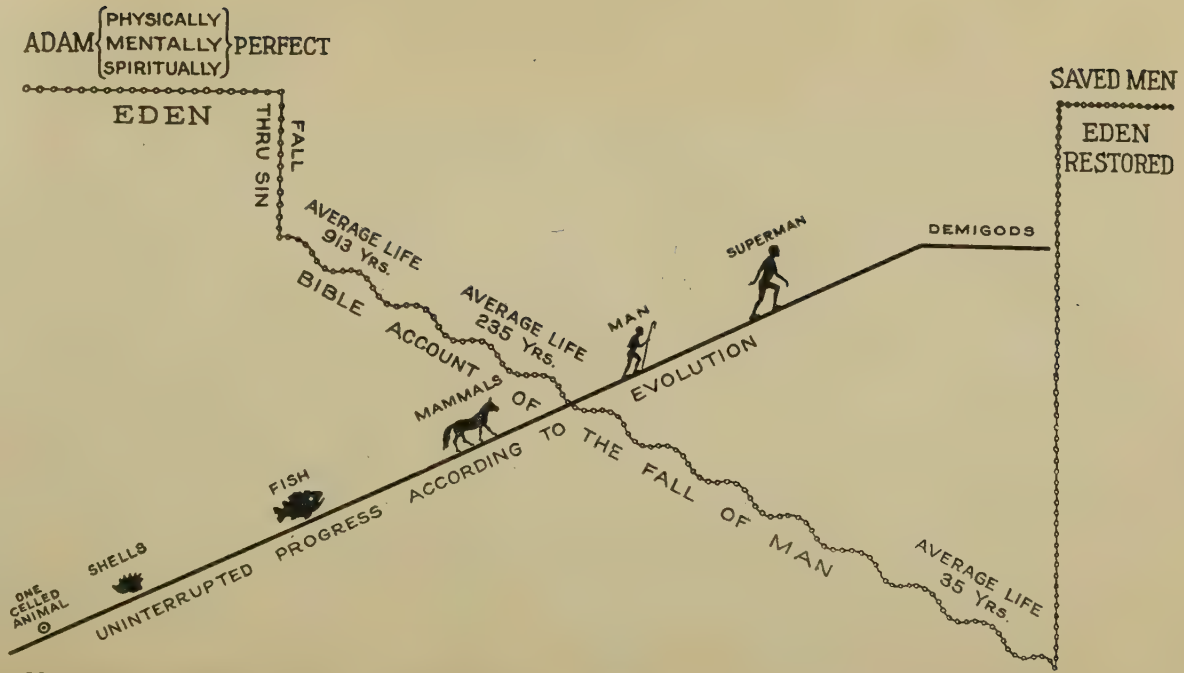
Chapter Eleven

Christian Philosophy

PHILOSOPHY may be defined as an orderly account of the universe in the light of all our available knowledge. On this basis, every person has some sort of philosophy,— he has some sort of explanation of the great facts of existence. The evolutionist has his philosophy, and the Christian has his; and necessarily the two are quite different from each other.

If we come to grips immediately with the chief point on which these two systems differ from each other, we may begin by saying that the essential idea of the evolution doctrine is *uniformity*. It says that the present is the measure of the past, and the measure of all the past. It says that life in all its various forms and with all its characteristics must have come into being by causes similar to or identical with those forces and processes which now prevail around us. As H. E. Compton expresses it, evolution "teaches that natural processes have gone on in the earlier ages of the world as they do to-day, and that natural forces have ordered the production of all things about which we know."—"*The Doctrine of Evolution*" (*1911*), *p. 1*.

Two thousand years ago a writer of the early Church predicted the prevalence of just such a doctrine, and very neatly and very accurately described its advocates as saying that, "since the fathers fell asleep, all things continue as they were from the beginning of the creation." (2 Peter 3: 4.) The reader will note that the words are, *not* "from the *close* of the creation," but "from the *beginning* of the creation." In other words, creation itself is included in the scheme of uniformity here expressed, just what we have found is the characteristic doctrine of modern evolutionists. And the reader should also note from the context that the people here spoken of and described are said to mock at the suggestion of the second coming of Christ, because of their cherished philosophy of uniformity, as already expressed; and that they have arrived at their philosophy of uniformity because they have already grown accustomed to denying the fact of a universal Deluge. All of which, we must own, sounds very modern indeed.



How can it be said that evolution and Christianity agree, when God's history is diametrically opposed to man's?

Creation a Completed Work

In contrast with this doctrine of uniformity, as held by all evolutionists, the doctrine of *creation*, as held by believers in the Bible, says that, back at a period in the past called the "beginning," something took place which is *not now taking place*. In other words, the doctrine of creation is that the beginning of things was in some way *different* from the way in which the things of nature are now being sustained or perpetuated. *Time* is in no way an essential factor in the matter; neither the length of time spent in the creation, nor how long ago it took place, makes any difference in this connection. The essential idea is that *creation is a completed work and is not now going on*. And the Bible expressly says that the Sabbath was given to the race as a memorial of this completed work of creation, and as a reminder that the origin of things was somehow different from the present order of things, which we call the reign of natural law.

In a former work ["Q. E. D., or New Light on the Doctrine of Creation" (1917)], I have shown how the failure of modern evolutionary science to account for the origin of matter, energy, life, and "species," or the more distinct kinds of life, constitutes a proof, a Q. E. D., that there must have been a real creation "in the beginning." I need not repeat the argument here. It may suffice for us now to pass along to discuss in a very brief way the three great problems of philosophy; namely, *God, personal freedom or free will, and the future life*. Many other questions are of course involved, but these are the three pivotal points about which all philosophical discussions have turned, ever since the time of the ancient Greeks.

The Way to Find out God

The Christian idea of God, as a personal Being, not a mere abstraction or another term for the forces of nature, but One who loves and sympathizes with all His creatures,— this idea is the most sublime concept ever attained by the mind of man. Not that man by his own efforts of thinking or by his discoveries has worked out this idea; it has really come to us through the Bible, God's revelation of Himself.

In modern times many writers have essayed to elaborate and discuss this idea of God, and to develop the proofs that we now possess not only of His existence but also of His character an

Courtesy Canadian Pacific

Tokawkaw Falls, Canadian Rockies. Is nature independent of God?
(106)

His relations to His universe. Many of these works are useful and valuable. To these works the reader is referred for a further consideration of this idea. Here it must suffice to point out that we must not expect to be able to demonstrate the character and existence of God in the same crass way in which we can prove the existence of London or the nature of electricity. God has wisely ordained that His relations with His creatures are at present to be conducted from behind a veil. Were He to manifest Himself to mankind directly, His majesty and grandeur would so overpower our senses and our every faculty that *real freedom of action would be obliterated.* He is not willing to coerce the will of man in any such fashion. He must at present keep behind the veil; but the promise is that to those who now accept His love and His fellowship by faith, the future will open up the blessed privilege of seeing Him face to face. "Now I know in part; but then shall I know even as also I am known."

A Running-down Process

The scientific view of the universe is that the *stuff* of which man himself and the objects around him consist, must have a real existence. Chemistry tells us that there are some ninety-two kinds of matter composing the earth and the things upon it, these ninety-two kinds of stuff being called the chemical *elements.* The recently developed science of physical chemistry, by means of the phenomena of radioactivity, has shown that these elements are running down or disintegrating; the heavier elements, by loss of electrons, constantly changing into some of the lighter ones. But it has found no hint of anything like the *reverse* process anywhere throughout the universe. A very reasonable inference from these facts is that this stuff called matter must have been created by God at some definite time in the past. These ninety-two kinds of elements could not have existed from all eternity; for this running-down process would all have been over long ago.

Thus we seem to have a scientific proof that the stuff of which the world is composed must have been created. But by a little careful reasoning also, we can arrive at the conviction that it must be so. For if we assume that this stuff, matter, has existed from all past eternity, we are thus making matter *independent of God.* That is, matter must have certain properties

International

In the wake of the Japanese earthquake.

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The volcano of Vesuvius in eruption. Can God control the elements?

— or all its properties — which God did not give it; and therefore it may well be supposed that in some respects matter is quite unmanageable and God cannot always do with it quite as He likes.

A Finite God

Now many philosophers both ancient and modern have adopted this very position. William James was one of these; and he has had many followers. By this doctrine of a *finite God*, one who is not in full and complete control of the universe, these authors have sought to account for the physical and moral evil in the universe. This view does seem to account for the evil in the universe as being due to something inherently wrong or unmanageable in matter itself. But it degrades God to a mere

Evil had a beginning, and the supreme sacrifice will bring it to an end.

finite being, much like ourselves, who may be doing the best he can under the circumstances, but one who is in no respect the Creator of all things.

The evolution theory is quite sympathetic with this theory of a finite God. Physical and moral evil looms up hugely in the theory of organic evolution; and few theistic evolutionists have had the hardihood to say that an infinite, all-wise, all-powerful Creator, who had already created matter itself, deliberately made man by the long-drawn-out agony of organic evolution. They have usually dodged the difficulty by claiming that matter is itself eternal, and that, as Le Conte expresses it, evil "must be a great fact pervading all nature and a part of its very constitution."—"*Evolution and Religious Thought*" (*1899*), *p. 365.*

But this is not Christianity; it is paganism stark and unadorned. Exactly the same view of matter as being inherently evil, and also as having existed from all eternity, was taught by all the ancient pagan philosophers. In our day this old foe has reappeared with a new face; but its revival here in modern times only serves to show how many essentially pagan notions are being taught all around us even under the guise of Christianity. The Bible teaches that evil is not eternal, either past or future. It had a beginning; and it will also have an end.

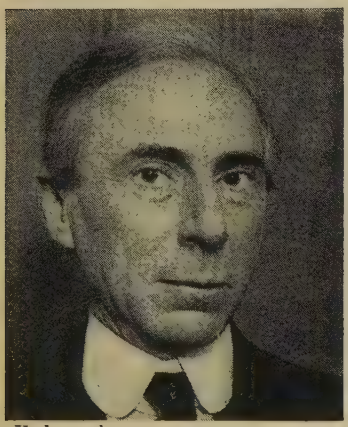
Freedom to Choose

This brings us to the subject of freedom or free will. In making intelligent beings with genuine free will or moral freedom, God must run the risk of having some of these created beings (whether angels or men makes no difference in the principle involved) choose something *wrong*, something quite out of harmony with God's plan for the universe. I do not mean that some of His beings might make an intellectual error, a mistake of judgment; this is not a sin, and never involves moral evil. But real free choice implies always the ability to abuse this freedom of choice by choosing something utterly different from God's way, something contrary to God's plan for the moral conduct of His created beings. This would be sin, rebellion; and the Bible teaches that this is what has happened. This is the prime cause of evil.

At present God is allowing sin to work itself out into full development, to show the universe what a horrible thing it really

is. The cross on Mount Golgotha is an everlasting testimony to the universe that sin is a horrible thing; that when allowed to run its course it will turn angels into demons and men into mere tools of demons.

But the cross also proves that God really loves His creatures. It proves that evil and sin are not due to any fault on God's part; and it shows how much God himself is willing to give up in order to make His children happy. Evil men and evil angels have constantly charged God with being a tyrant; the cross refutes this, and also shows how God handles this great rebellion. And while neither the Bible nor a rational philosophy gives us any promise that *all* of God's creatures can be won back by such an exhibition of limitless love, the former does testify that by this method of God in dealing with rebellion, the universe will ultimately be more secure, more happy, and more completely loyal to their Creator than if this horrible nightmare of sin had never occurred. This final outcome is the ultimate justification for God's running the risk of such a condition as the present, by originally creating beings with moral freedom, with the power to serve God or not to serve Him.



Underwood
Bertrand Russell

A Nightmare of Despair

We have now considered *two* of the *three* great problems of philosophy. The one remaining is the problem of a future life.

"If a man die, shall he live again?" cried the afflicted patriarch; and for the many thousands of years since then this question has been asked by multitudes of the children of men, who could not see beyond the portals of the tomb.

Listen to the despairing wail of one of our cleverest modern writers, one born to little less than royal luxury and culture, but who has rejected the Christian hope for the despair of evolution as a world-process:

The women at the tomb. Men will live again because Christ rose from the dead.

"Brief and powerless is man's life; on him and all his race the slow, sure doom falls pitiless and dark. . . . The life of man is a long march through the night, surrounded by invisible foes, tortured by weariness and pain, towards a goal that few can hope to reach, and where none may tarry long. One by one, as they march, our comrades vanish from our sight, seized by the silent orders of omnipotent Death."—*Bertrand Russell, "Mysticism and Logic," p. 56.*

Thank God, the Christian is not haunted by any such nightmare of despair. He knows in Whom he has believed, and is persuaded that He is able to keep that which has been intrusted to Him against that day.

And yet, it seems to me that we are in danger of losing sight of the central idea of that blessed future life; for throughout the New Testament this future immortality is always centered in the resurrection.

There are two or three texts in the New Testament that, if taken by themselves, might seem to teach the immediate reward of the saints at death. On the other hand, scores of passages far more plain and clear dwell upon the resurrection of the body as the key to the future life. It is at the resurrection that we become immortal; it is then that this mortal puts on immortality; it is then that we meet with the loved of all the past ages; it is then that we become like our blessed Lord, for we shall see Him as He is. And I cannot think that it is safe to dwell so intently on two or three (confessedly ambiguous) passages that seem to

speak of the reward of the saints as taking place immediately after death, when such a view of the case seems to dislocate the great fact of a resurrection of the body, and seems to render a real, final judgment meaningless.

At any rate, if man is a *unit*, as modern biology and psychology both testify, then it certainly follows that the resurrection of the body is the only scientific way in which we can understand the doctrine of a future life. And it is worthy of especial attention in this connection, that this hope of the resurrection of the body looms very large in the entire literature of the Bible, but especially in the New Testament.

Keystone View Co.

The hope of the resurrection looms very large in the Bible.

Chapter Twelve

Red Dynamite

SUPPOSE we have two men before us.

The one has been reared in a Puritan home. He has learned to love the Bible and is familiar with its teachings. He believes he is under obligation to God as his Creator; he also feels himself a debtor to all his fellow men, for they too were made by the same Creator. As Christ has pardoned his sins and given him the promise of immortal life, he feels under everlasting obligation so to live that he may help proclaim this blessed gospel to all with whom he may associate.

The other man has been trained from childhood to regard the Bible as a collection of myths and legends, representing the religious life of an ancient Oriental people who considered themselves as the special favorites of Heaven. He believes that man in his long evolution from brute ancestors has been groping after the dim Unknown with great persistence; but he is not sure that this groping has accomplished anything worth while. He intends to make the most he can out of this life; for he expects to be a long time dead. Darwinism may not be the whole truth about the bloody path by which man has climbed up into his present position; but he believes every man has to look out for himself.

The first man believes that his Creator has given definite commands regarding the sacredness of human life and even the sacredness of property rights; he constantly feels, "Thou God seest me"; and when confronted with a temptation to take the property or the life of another, he instinctively exclaims, "How can I do this great wickedness and sin against God!"

The other man believes that all our ideas of morality are mere conventions, customs that the developing human animal has found most convenient for living together in communities or society; but there is no such thing as inherent property rights; it is just a notion that has come down to us from the time when those who *had* were trying to invent some idea to prevent others from taking it away from them. He believes in the ethics of —

> "Those should get who have the power,
> And those should keep who can."

International
The Bible and the church have been the mainstays of civilization.

And when confronted with an opportunity to get something claimed by someone else, his chief concern is, "I wonder if any one is likely to see me do it."

Civilization not a Cause, but a Consequence

Now suppose you had a million dollars in gold and negotiable securities which you had to take in an automobile down a long, lonely road on a dark night, and you had to take one of these two men to sit in the back seat with an automatic revolver. How long would it take for you to decide which man it would be?

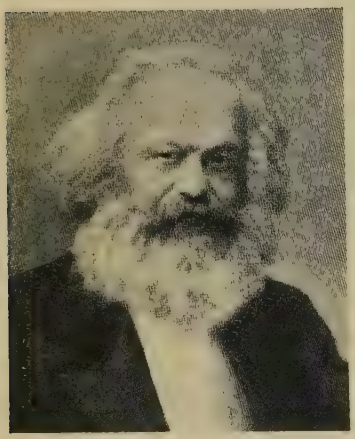
This million dollars in gold and securities represents the treasures of culture and civilization that have been intrusted to us. Is it safe for us to intrust these treasures to the tender mercies of men who have lost all sense of inherent moral obligations, and who think that our system of morality is only what the developing anthropoids have agreed upon as the best arrangement for the smooth running of society?

Many are the voices to-day that are lamenting the breaking up of civilization. But the trouble lies deeper than most people think. We might manage to get along without victrolas, the radio, or even without the movies. But civilization is *not a cause, but a consequence.* It does not produce an orderly, moral state of society and high religious principles; it is itself produced by religion and morality. Religious convictions produce morality, and a combination of these two produces civilization. But this order cannot be reversed, for a paganized civilization, with morality reduced to merely the conventions that a crowd of

evolving ape-men have agreed upon for the rules of society, has nothing to hold it together. No form of civilization can long withstand the break-up of the family and the loss of the sacredness of human life and of the rights of private property, which an evolutionary system of sociology has been industriously seeking to promote for the past two or three decades.

Evolution and Socialism One

The fact is, Marxian Socialism and the radical criticism of the Bible, though arising first in point of time, are now proceeding hand in hand with the doctrine of organic evolution to break down all those ideas of morality, all those concepts of the sacredness of marriage and of private property, upon which Occidental civilization has been built during the past thousand years. Anglo-Saxon freedom and those orderly arrangements of society that we commonly term democracy and Western civilization are doomed, unless we return to those primal ideas of God as our Creator and the Bible as His sacred revelation to mankind.



Karl Marx, original Socialist.

Some years ago, Bouck White, then pastor of the "Church of the Social Revolution," New York City, gave out an interview which seems very enlightening. He said that he was a graduate of Union Theological Seminary, and wished to make an appeal to his "red-flag comrades" to recognize the teachers of the radical criticism of the Bible as their most efficient helpers and promoters, in seeking to bring about the Social Revolution. Said he:

"Christendom reposes upon a book, the Bible. So long as that Bible was supposed to teach peace and quietness, Christendom had peace and quietness. But now comes Biblical scholarship, and shows by cool, masterly science that the Bible is one long cry for human rights, against the arrogance of the moneyed mighty. Professors ———, and ———, and ———, and ———, at Union,— yes, and President ——— himself — are deserving of a

International

A prominent New York pastor celebrates pagan Indian rites in his church service to provide "the unusual thing."

place alongside of Karl Marx; for in their discoveries as to the real, the social meanings of the Biblical writings, they are planting mines of social dynamite underneath this civilization of massive property rights, to blow up the whole apparatus."

Dangers in Present Education

It is no effective way to meet the present situation, for us to keep cracking jokes at the Bolshevists and the radicals, occasionally jailing a few of the more noisy ones. Just at present radicalism is not popular in America. *But Marxian Socialism and*

the dictatorship of the proletariat are merely the economic aspects of the doctrine of organic evolution; and just so long as the latter is taught from the kindergarten to the university, a revival of the active propaganda for the Social Revolution is as inevitable here in America as is to-morrow's sunrise. When this agitation does again break loose, where are the arguments to answer it, if a generation has grown up who implicitly believe in the doctrine of the animal origin of man, upon which all radical propaganda is based?

Kadel & Herbert

Lenin, of Russia, who led his countrymen in the establishment of a Socialist state.

What more can I say here? I have already written quite fully on this subject in my "Poisoning Democracy." But I wish that somebody or something could make the people of America see what a viper they are holding to their bosom, when the children in the schools, as well as the university students, are being taught doctrines regarding the origin of man's body, and regarding the origin of the family and of social customs, that are making the rising generation a helpless prey to the radical agitators of to-morrow.

Rome was a long while in dying, because her people had once been clean and free. The Anglo-Saxon peoples have for centuries been the most orderly, the most law-respecting people on earth; and nothing but a radical undermining of the basic principles of their family life and their morality could ever induce them to wreck that long growth of the centuries that we call democracy and the sacredness of individual liberty.

"But come it will, the day decreed by Fates;
How my heart trembles while my tongue relates;

The day when thou, imperial Troy, must bend,
And see thy warriors fall, thy glories end."

While stands the belief in the Bible as God's revelation, America shall stand; but when this belief in the Bible falls, America will fall; and when America falls, the world!

Fox Film Service

Scene at the famous Wall Street bomb explosion, New York "Red" influence is wide in America.

Chapter Thirteen

Babylon the Great

THE history of "Modernism" is quite ancient. It is as old as speculative philosophy, as old as man's organized opposition to God's plan for saving men.

The Saducees were the Modernists, the skeptical religionists, of their time. The Neo-Platonists maintained the tradition during the first centuries of the church, and tried to blend and harmonize pagan philosophy with a denatured form of Christianity. The Humanism which preceded the Renaissance was of the same order, as was also the "Enlightenment" or Rationalism of France and Germany during the eighteenth century. To-day we see an almost world-wide movement called "Modernism" posing before the world as the only form of religion which in our day is worthy of a moment's consideration by intelligent men and women.

Modernism is not a synonym for modern scholarship. I have met Modernists — one could find many such — who could not tell the difference between an angiosperm and a dinosaur, or tell a chromosome from an electron. Doubtless similar instances could be given on the other side. It might be thought that Modernists are chiefly educated along scientific lines, while Fundamentalists have chiefly had a classical or a literary or a theological training. But this is not always the case.

Modernism is Unbelief

Modernism is an attitude of mind, just as a belief in the Bible as God's revelation is an attitude of mind. The Bible expresses this attitude of mind on the part of the Christian by the one word "faith." In contrast with this we may be permitted to designate Modernism by the one word "unbelief." But the Modernist also believes in something. Usually it is what he regards as the results of "modern scholarship,"— whatever that may be. Often it is a belief in his own scholarship. Whatever it may be, this object of the Modernist's belief or faith is *something else* than God's special revelation to mankind, the Bible.

One trouble with Modernism is that it is not modern enough.

International

Harry Emerson Fosdick, leading advocate of Modernism.

Most Modernists are reactionaries in science, just as they claim to be "progressives" in religion. They are helplessly tied to the science of two or three decades ago. Some seem to have heard of Mendelism, a few have an idea or two about radioactivity. But

not one of them seems to realize that modern biology has been running up a blind alley, so far as evolution is concerned, for the past twenty years. And if any of them have ever heard of the recent discoveries in geology, they cast them aside with a sneer; for these discoveries are so palpably against every possible form of organic evolution.

No, Modernism is not progressive; it is not modern.

Christian Doctrine Important

But in this chapter we must study chiefly some moral and religious results of the evolution doctrine, to see how these doctrinal results stand with reference to Bible Christianity.

First, let me say that religious doctrine is not everything. I know some men whose doctrinal beliefs I think terribly wrong; but they are splendid men, and seem to be true Christians. These I consider wrong-headed men, though their hearts are on the right side. I hate to have to regard them as mere decoys of the devil, which he is using to put up a good front to an anti-Christian cause.

Then there are some men who are doctrinally sound; but their hearts are wrong, because their lives are crooked. These certainly are false signboards; for the Master said, "Ye shall know them by their fruits." These certainly are doing the enemy's work in a very effective way.

But true doctrinal beliefs regarding the great fundamentals of the gospel are very important. As has been expressed by another:

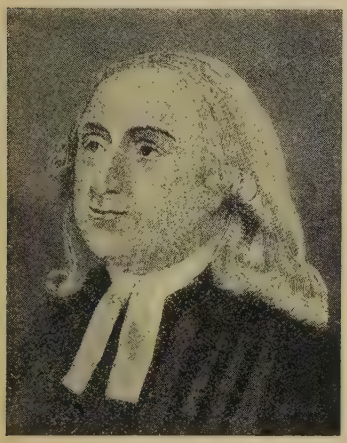
> "Christian life without Christian doctrine has never yet appeared. Those who claim to show it in Christian lands are simply cuckoos in nests of Christian doctrine which they built not, but whose warm environment makes them what they are."

From the point of view of Heaven, there are not a large number of classes of people in the world, just two: the righteous and the wicked. These two classes appear to grade off into each other; we recognize the types, the conspicuous examples, but thousands of our fellow men we cannot classify.

By Their Fruits

And it is a good thing we cannot. This job has not been given us to do. But we can all be ambassadors for the King, if we are on His side. And one of the most effective ways in which, in

these days of confusion, we can be true ambassadors of the King, is to keep ever prominent in our own minds and before the minds of others a clear line of demarkation between the true and the false, between the great essentials of the Christian faith and their opposites. Great Babylon of our day claims to be built upon the very site of ancient Zion; the Babylonians are almost all of them constantly parading around under the banners of the New Jerusalem; but there are certain hallmarks of the two parties that, if we can get at them, will always tell to which side a person belongs. These are not mere passwords, mere shibboleths; they are great essential truths (or falsehoods) branded into the very mind and soul of the individual. And whenever we can get a peep into the secrets of the individual's life, we can always be sure of the side to which he belongs.



John Wesley.

These great essential truths (or falsehoods) all focus around the idea of *sin*,— its *cause*, its *nature*, and its *remedy*.

1. *The Cause.* So far as we are here and now concerned, the cause of sin is in man himself. Sin started long ago as a deliberate rebellion against God, and man is now born with this rebellious nature. He is out of harmony with his Creator and with the ethical order of the universe. This is what theology calls the natural depravity of man. It is due to what is called the fall of man; and as Wesley says, "The fall of man is the very foundation of revealed religion," as distinguished from natural religion.

Evolutionary philosophy also says that sin is a great primal fact; but it makes sin about equivalent to errors or mistakes. All men sin, because all make blunders or mistakes. Modernists, that is, evolutionists, seldom carry the idea further than that. Education will save us from all kinds of mistakes; therefore, says the Modernist, moral and religious education will save the race from sin.

Not so, says Christianity. Man is depraved, his nature is sinful and, worst of all, he cannot hope to make himself one whit better.

As we have already seen in a previous chapter, back of the present condition of things, evolution either lays the blame for sin directly upon God, if He really made the entire universe and all the stuff of which the universe is composed; or it shifts the blame for sin to *matter*, and in this way seeks to relieve God of any blame, by saying that matter is eternal with some unmanageable properties about it which God (and man) must try to counteract. We have already discussed this heathenish philosophy in Chapter X of the present work and elsewhere.

The Bible and historic Christianity teach that sin is due to the deliberate wrong choice of morally free and accountable beings. This has infected the race, and we have all inherited this sinful or morally infected nature. To quote John Wesley once more:

"All who deny this, call it original sin or by any other title, are but heathens still in the fundamental point which differentiates heathenism from Christianity. . . . Or, to come back to the text, is 'every imagination of the thoughts of his heart evil continually'? Allow this, and you are so far a Christian. Deny it, and you are but a heathen still."—"*Works*," *Vol. V, p. 195.*

Contrastedly, the evolutionary teaching is that sin in all its phases is merely our inheritance from our animal ancestors. Says John Fiske:

"Theology has much to say about original sin. This original sin is neither more nor less than the brute-inheritance which every man carries with him."—"*The Destiny of Man*," *p. 103.*

The direct opposition between the Bible and Evolution is very forcefully expressed by Robert Blatchford, the English atheist:

"But — no Adam, no fall; no fall, no atonement; no atonement, no Saviour. Accepting evolution, how can we believe in a fall? *When* did man fall? Was it before he ceased to be a monkey, or after? Was it when he was a tree man, or later? Was it in the Stone Age, or the Bronze Age, or in the Age of Iron? . . . And if there never was a fall, why should there be any atonement?"—"*God and My Neighbor*," *p. 159.*

Here we have the first direct issue. Christianity says that man is a fallen being, though made originally in the likeness of God.

Evolution says that man is a rising being, slowly becoming more and more like God.

Between these two ideas there is no similarity, they are antagonistic and mutually exclusive.

2. *The Nature of Sin.* All acknowledge that sin is a bad thing, a very bad thing. But, as already remarked, evolution makes it little more than the natural tendency toward mistakes or errors on the part of beings who do not have all knowledge. The theory seems to be that if men could always see far enough ahead, could see all the facts involved, they would in every crisis or temptation not sin but choose the better way. As honesty is the best policy, so sin is always a blunder; and education will save men from being so shortsighted as to choose the wrong when the right is always infinitely better.

Christianity, however, says that man not only sins, but he is sin incarnated, a living, breathing, active sin. It is not doing that is the sin, but the being. Of course, a wicked act is sinful, is blameworthy; but by keeping a man from wrong acts we do not take the sin out of his nature. Solitary confinement is no cure for sin.

Racine Photo Bureau

Will education save the race from sin?

Christianity says that man in his natural state is at enmity with his Creator. He is not subject to the Creator's laws and rules, indeed he cannot be without a change of nature. This change of nature the Bible calls being born again. And Christ on a memorable occasion said, "Except a man be born again, he cannot see the kingdom of God." That is, he cannot enjoy eternal life with God's people who have had their natures changed and have been brought back into harmony with God and His government.

This being born again, the new birth, or regeneration, is thus the absolute, preliminary process of becoming a Christian. One who has been thus born again is a Christian; one who has not yet been born again is not a Christian. The Bible recognizes no half-and-half condition. We are not Christ's unless we are His entirely. I know this may sound extreme; but stern logic tells us that this must be so; and the Bible confirms it.

Thus we reach our second fundamental difference between evolution (or Modernism) and Christianity. The latter says that man is hopelessly evil, utterly lost to God's claims upon him and to the claims of his fellow men, except so far as God's Spirit works upon his heart to help counteract this depraved tendency.

Boston Photo News

The church not thoroughly grounded on the essential truths of Christianity, is destined to ruin.

It also says that the entire change in man's nature must come from God himself. Modernism says that man's nature is not hopelessly bad, that no supernatural change is necessary, but that education and enlightenment will do all that is necessary or all that is possible to be done.

3. *The Remedy.* Christianity says that the remedy for man's sin does not come through his acceptance of a formula, his belief in a creed, but by a definite moral transaction between himself and his Creator, by which the sinner owns his lost condition and accepts God's terms fully and entirely. There is no other way.

Modernists also talk about a change of heart, about a new birth, and all the rest of it. They seem to have taken over all the old terms common to Christianity, and are now using these terms with changed meanings. This makes the whole matter very confusing. Furthermore, there is a pseudo-Christian substitute for conversion, the devil's counterfeit of the new birth, which many persons have experienced, notably Ignatius Loyola, Thomas Carlyle, Mary Baker Eddy, and many others.

The genuineness of a notable religious experience can be tested only by God's Word. "Ye shall know them by their fruits," said the Master. We are also told that, "If any man willeth to do His will, he shall know of the teaching." It is the privilege of every one to know exactly where he himself stands. We may or may not know about some one else. But in a matter of such prime importance, surely it is essential that we make no mistakes. "To the law and to the testimony! if they speak not according to this word, surely there is no morning for them." Isa. 8:20, A. R. V.

"Come Out of Her, My People"

We have now been considering the characteristics of the great modern Apostasy, which is called in the book of Revelation, Great Babylon. But in this same book of Revelation, God speaks of sending a special message to His people, "Come out of her, My people, that ye be not partakers of her sins, and that ye receive not of her plagues." Rev. 18:4.

What is it to be in Babylon? What is it to come out of her?

Let it be noted, that it is God's true people to whom this warning is addressed. They are in Babylon; and they are warned to come out.

To be in Babylon is to be doing as the Babylonish people do. It is to continue believing what the Babylonish people believe. It is to be associated with them, to be confederated with them in all that Babylon stands for, in contrast with what true Christianity stands for.

To come out of Babylon is not primarily to leave some church. It may involve that; but that is not the prime essential. To come out of Babylon is to quit the ways of Babylon, to quit believing what Babylon is teaching, to stop doing what Babylon is doing.

If any reader of this work finds himself in a "Modernist" church, let him simply be sure that he himself is living every day and every moment as a real child of God. If he does this, the Modernists may soon make it so uncomfortable for him that he cannot stay in this organization any longer. No one else can tell such a person what to do. He should seek wisdom and guidance direct from God. "If any of you lack wisdom, let him ask of God, . . . and it shall be given him." James 1: 5.

It is not absolutely essential that such a person already know of a better, a more Scriptural church to join. A church home is a good thing, a very pleasant thing; and such a home of brothers and sisters has been ordained of God for the good of His people. But a man is not cast off from God because he is an orphan; and a man who is an ecclesiastical orphan is not at all cut off from his direct communion with God. The great thing is for each one to be sure that he is right with God himself. This is an individual matter between the soul and his God; no outward circumstances can separate the soul from knowing God's will, if by humble dependence upon Him and His Spirit the soul is determined to do only what God requires.

But we are living in the days of the Great Apostasy. And to His people in these last days God is giving a special warning against Great Babylon: "Come out of her, My people, that ye be not partakers of her sins, and that ye receive not of her plagues" Rev. 18: 4.

THE END

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